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ON THE INSIDE

Contents

HAPPY HEARTS

8 **5 WAYS TO BRING YOUR DOG JOY**
Treat your pup with loving kindness and you'll be rewarded with a loyal friend for life.

10 **PUPPY MAGIC**
Human biology explains why we find baby dogs so irresistible.

16 **YOUR DOG IS A UNICORN**
It's the individual, not the breed, that truly shapes canine personality.

22 **LIKE OWNER, LIKE PUP**
To their benefit or disadvantage, your pooch's behavior may strongly resemble yours.

HEALTHY HABITS

30 **5 WAYS TO KEEP YOUR DOG WELL**
There's a strategy for raising and nurturing a healthy animal through a long and active life.

32 **FOOD FIGHT**
How to feed your dog has never been more contentious. Here's everything you need to know about healthy canine diets.

38 **DREAMLAND**
Yes, your pet drifts off there. Here's why it matters.

44 **BEST BITE**
Good dental care is critical to your dog's overall well-being. Here are tips on how to keep canine teeth healthy.

SAFE & SOUND

52 **5 WAYS TO PROTECT YOUR DOG**
How to keep your pet secure in this often dangerous world.

54 **STORMY WEATHER**
Be prepared for the risks that natural disasters pose for your pup.

60 **TO PET OR NOT TO PET?**
It's important to keep interactions between kids and dogs safe.

66 **THE SECRET LIVES OF LITTLE DOGS**
Pint-size pooches have their own unique safety concerns to consider.

72 **HOW TO ID YOUR PET**
Microchips and tags can work together to help you locate your dog.

ENERGIZED & ENGAGED

78 **5 WAYS TO WAKE YOUR POOCH UP TO THE WORLD**
With more freedom, your dog will feel more vibrant and alive.

80 **DOGS CAN TALK**
Special language buttons can allow your pet to communicate with you.

86 **THE POWER OF PLAY**
Dogs learn best when they're happy, motivated and receiving praise.

92 **ON THE MOVE**
These tips will make traveling with your pet much easier and calmer.

10

86

66

38

Editor's Note

Most of us welcome dogs into our lives because they bring us happiness. In this issue we show you how to repay the favor by boosting your canine pal's daily dose of joy and ensuring his or her health. There's nothing that makes your pup happier, after all, than a full and deeply felt relationship with you. To see to that, it's important to truly know your dog as an individual. In "Your Dog Is a Unicorn," we explain how each creature's unique personality trumps the umbrella of their breed. As your dog's guardian, you also need to nurture their wellness; we'll show you how to do that day by day. We also share the latest nutrition advice and tips for better sleep habits while covering how to tend to your pet's dental needs and safety, even in the case of a natural disaster. And in our "Dogs Can Talk" feature, we discuss the latest in human-dog communication through "buttoning." While dogs lack the physiology to utter human words, they can press "talking buttons" to communicate dozens of words and ideas to their owners. We'd love to hear their feedback on this issue!

Pamela Weintraub
Editor-in-Chief

HAPPY HEARTS

Nothing makes your dog more content and at ease than a loving, uplifting, positive relationship with you.

PLAYBOOK

5 Ways to Bring Your Dog Joy

Treat your pup with loving kindness and you'll be rewarded with a loyal friend for life.

A dog's nose has more than 200 million scent receptors; humans only have about 6 million.

Let your dog go on a “sniff walk” where they can choose when and what they want to smell.

If you love your dog and train her with compliments and praise, she is likelier to have a sunny view of the world. But beyond the basics, the experts recommend these important ways to give your pooch an emotional boost.

1 KNOW YOUR DOG AS A “PERSON”

That means tuning into her likes and dislikes, nurturing the former and avoiding the latter. “There are two approaches to tending to the needs of an individual dog. The first is minimizing the experiences that the dog finds to be negative; go out of your way to prevent situations where the dog is fearful,” says psychologist and dog trainer Zazie Todd, author of *Wag: The Science of Making Your Dog Happy*. “This ranges from avoiding the situation to teaching the dog to like the situation instead, or even using medication under the guidance of a veterinarian. The second is knowing what that particular dog enjoys. Do they love to play fetch, or do they prefer to go for a swim? Do they love agility class, or do they prefer to mooch about on a forest trail? It’s up to us to know what our dog likes and give them the opportunities to experience it.”

2 BE AN ARCHITECT OF THE NIGHT

Your dog needs to feel comfortable during sleep and, of course, dreams. Many dogs might love nothing more than to hop into bed with you, but for a number of reasons, including human allergies, that doesn’t always work. In response, some owners push in the opposite direction, forcing their dog to sleep alone behind closed doors—a situation that often leads to anxiety. If your dog is agitated sleeping away from you, create a happy medium where you each have your own space but are not shut off from each other.

3 SET UP A PLAYDATE

If your pup likes to play with other dogs, give her a chance to do just that. There’s nothing sweeter than watching pooches romp with each other and having fun, and socializing is good for your furry friend.

4 BORN TO DIG?

Many dogs are natural-born diggers, and nothing makes them happier than creating a hole in your yard—or your favorite sofa. To satisfy their needs while protecting your valuables, give diggers a set spot, such as an outdoor sandbox filled with dirt or a bin of material they can shuffle through at home. Dogs have canine instincts that are, after all, not human—so instead of punishing or suppressing those tendencies, we must find ways to help them indulge.

5 PUT ON A TV SHOW

No one wants their fur baby to turn into a couch potato, but a new raft of shows made specifically for dogs can be engaging and stimulating for brief periods of time. Just remember that content matters and human TV can do your dog more harm than good. We recommend the DOGTV network and shows such as *Puppy Time*. If the colors seem off, just leave that dial alone. Those hues are for the dogs, not for you. Dogs can see yellow and blue, but green and red appear gray to your pet. For the ultimate half hour, snuggle with your dog and watch the show side by side.

One study found that 46% of kids say a pet is their main emotional support after their parents.

Humans and dogs have grown up together, not just in the course of individual lives but through the evolutionary arc of the two species.

SCIENCE OF CUTE

Puppy Magic

Babies, kittens and, yes, the littlest dogs, pull at our heartstrings. Deep human biology explains why we find them so irresistible. **BY KATJA PETTINEN**

Babies can be a lot of work for caretakers, be it their parents, grandparents or the village at large. So it's a good thing that there are some built-in biological mechanisms that help us overcome any feelings of irritation. Another sensation often takes over altogether, even if the child happens to be a stranger. Because this emotion isn't just directed at those we are connected to, it isn't really "love."

The Japanese language offers us the term "kawaii" that touches on this feeling of something being unbearably cute. We are drawn in, and our hearts melt; this happens even for those of us who are not parents or just not really into kids.

Our attraction to cuteness goes way beyond ourselves, our individual habits and our personal likes. Rather, it taps into a more universal human emotion and our species' way of being in the world—a pattern called "neoteny," or the retention of childlike features into adulthood.

Culturally speaking, we are a species consistently drawn to the juvenile features found in babies, a trait engineered by evolution to guarantee we will always protect and care for our young.

ANIMALS HAVE THE "IT" FACTOR

This same deep attraction reaches beyond us as humans into our relationships with other species such as dogs. Through various cultures, we humans find puppies irresistibly cute, and the presence of this feeling is part of our shared humanity (though different languages highlight distinct aspects of these shared feelings).

Across the animal kingdom, newborns wow adults with the features of neoteny, and caretakers are seduced into caring for their offspring as a result. At times, even strangers from different species participate in such caretaking: Famously, a bottlenose dolphin mom was found nurturing a whale calf. While we cannot fully grasp the emotions of other animals, we can be confident that the feelings are there (by now, a host of research has shown that "feelings" do not belong to the human species alone).

Puppies, like human babies, do a lot of learning in their early months, so it's a good time to establish a bond.

Dogs and humans are partners for life.

Giving your puppy a gift will foster attachment.

A SPECIAL RELATIONSHIP

When it comes to the human-dog relationship specifically, the shared feelings between the two species are truly unique. This has to do with the evolutionary past and the deep history that we share: Dogs and humans domesticated each other during the earliest days of human evolution. We changed dogs, and they changed us, too.

This shared existence started to take shape around 30,000 years ago during the Paleolithic period, when humans were hunter-gatherers living in roaming bands. In this period before agriculture, cities or monetary exchange, humans were intimately familiar with the natural world. Being meat eaters and predators, humans all along have been keen observers of other species. Ancient wolves coexisted with these long-ago humans, and in several areas across Europe and Eurasia, wolves and humans had close encounters with each other. As two species, we were both drawn in, but in different ways.

The early humans began to keep and occasionally feed wolf cubs in their villages and base camps. While all baby animals are cute in their own way, there is something especially enticing to humans about the furry faces of puppies.

Today, we humans are even more drawn in, largely because of how dogs as a species have been shaped over thousands of years. While a wolf cub is cute and sweet, you do not want to cuddle with a grown wolf. But dogs are a different story. Over time, dogs have become more “neotenic” through captivity and human preferences that have prioritized childlike features. In comparison with their wolf ancestors, dogs have shorter skulls and snouts along with larger and more rounded eyes. Some breeds, such as flat-faced bulldogs, have been bred to heighten these features even further. We also find a version of neoteny in popular culture: The Walt Disney character Mickey Mouse was transformed by cartoonists from his early, much more ratlike version into a creature with big rounded ears and huge babyish eyes.

Some scientists suggest that over the past several million years, we humans have ourselves—as a species—gone through a process of "self-domestication." As such, we now carry a number of juvenile or neotenic features in adulthood. Indeed, we retain many physical features throughout our life span that other primates exhibit only as babies.

Compared to our closest primate relatives, we stand out: We have no fur, our faces have become more gracile, or slender and vertical, and our teeth are smaller (no sharp canines that stick out except for Dracula).

The adorableness of puppies stimulates certain pleasure centers in our brains.

> Puppies with big eyes, rounded faces and juvenile movements tap a deep biological urge to nurture in the human psyche.

And behaviorally speaking, we engage in play even as adults (think of all the sports or video games that adults play).

While the earliest stages of dog domestication centered around work, such as pulling sleds, guarding and hunting, companionship became important along the way. Thousands of years ago, for instance, the Aztec and Maya of Central America and those in the Chinese empire bequeathed to dogs social roles from friendship to signs of status, including burial with novelty items and depictions in art. This is where some of the early miniature breeds came into existence—breeds not so helpful for towing a cart or hunting bison but useful as expressions of wealth, power or love.

THE FORCE OF HUMAN CULTURE

The Chihuahua's ancestral forbear, the tlalchichi, was bred by the Aztec and Maya empires and inspired the creation of several statues.

Such canines remained small throughout their life span and always looked childlike. In essence, the earlier and larger dog "prototype" became shrunken through breeding, and a new, more neotenous version was created through human cultural practices.

It's worth keeping in mind that such breeding practices aren't really for the benefit of dogs themselves. Many contemporary breeds are appealing to the human eye because we are so drawn in by neotenous pattern as a species. But, in many cases, these dog breeds develop persistent health problems. Because

of how far the body types of dogs such as terriers and bulldogs have been modified, they almost always require a caesarean section to give birth to their puppies. Other neotenous breeds have trouble breathing.

REPEAT WITH CAUTION

All around, neoteny is a fascinating pattern in nature and has been observed in many species besides dogs and humans, including insects.

On the cultural side of things, we humans have become quite drawn to such patterns, particularly as expressed in dogs and cartoons—not to mention countless internet memes. It is truly wonderful to feel so deeply connected to other species and to embrace the depth of the special bond that we enjoy with our canines. But we still need to exercise caution and care.

When attraction is fueled by human economic practices, the pull of neotenic patterns can also lead us into some ethically questionable actions, such as the production of breeds with longstanding health problems.

Being a neotenic, or "childlike" species ourselves, we humans might be particularly culpable for these kinds of questionable practices. But because of our culture and social organization, we are also capable of reexamining the ethics of our current practices for the better.

ONE OF A KIND

Your Dog Is a Unicorn

It's the individual, not the breed, that truly shapes canine personality. **BY KATJA PETTINEN**

If we commit ourselves to life with a dog, we want to make sure the animal in question will fit into our lifestyles and our households. Homes with cats or children, or those in a busy urban area have different attributes than rural households with lots of space to roam. That's why when people consider getting a dog for the first time, they often investigate the differences between breeds. When it comes to a dog's overall shape and size, this is a reliable yardstick. We know what we are getting with the appearance of a Great Dane or a terrier. With most pedigrees today, even coat colors are standardized through highly controlled breeding.

But a new study published in the journal *Science* shows that as it relates to the realm of behavior and how a given dog reacts to strangers, other dogs or small children is not predictable by breed. A "friendly" dog is not something you can rely upon by choosing a specific breed. It really comes down to happenstance and to parenting—a large part of the latter being set by the early environment that a responsible breeder can provide.

This new study was a large-scale examination of the long-standing question about how individual dogs of specific breeds act and behave. The American Kennel Club, for example, describes particular breeds with keywords such as "intelligent," "outgoing" and "affectionate," presumably capturing that group's personality. But we all know that individual dogs behave differently. And are bulldogs really more aggressive, or retrievers more friendly, as the general stereotypes would suggest? The key insight from this study reveals that the answer is no. Those traits vary by individuals, but are not set on a breed level.

The researchers sorted through data from more than 18,000 dogs,

A dog's temperament is determined less by genes than by the style of her first human guide.

Breed determines your dog's physical appearance but may have much less influence on personality.

For a dog that looks like your childhood pal, go by breed, but remember: Resemblance may be just skin deep.

provided by their respective humans through a citizen science project called Darwin's Ark. The study also analyzed DNA from some 2,000 of those dogs to probe the degree to which behaviors such as aggression or sociability might be heritable through genetics.

Right away, we can note that the sample sizes here are impressive. While many of us know dogs intimately, we do so only in small numbers. But in the careful and slow science propelling the new results, hundreds of different questions that the pooch owners all responded to were examined across a large pool of pups covering over 70 breeds. This is the main difference between the scientific way of looking at dogs and our everyday way of looking at them: We always live with individual, specific dogs, but scientists study populations and general patterns.

The large sample sizes allowed the authors to conduct fine-tuned statistical analysis across a range of behaviors, including whether the dogs in question enjoy getting wet or do circles before pooping. Besides the genetics and the breed, the researchers also accounted for other key categories such as age and sex to locate significant associations. While the sex of the dog doesn't make much of a difference when it comes to the behaviors examined, age does. It turns out old dogs do indeed learn new tricks (See sidebar at right).

THRESHOLD OF ANGER

When it came to analyzing how easily a dog acts defensively or aggressively toward something unexpected in their environment, breeds made little difference. Or, to put this more precisely, only 9% of the variation in behavior could be explained by breeds.

So, when it comes down to living with one or two dogs, a pit bull or a golden retriever are both likely, or unlikely, to act aggressively. Exactly how the chips fall with a particular dog in a particular situation depends on their own past experiences. And the one key feature in those past experiences are the humans in question: those that the dog lives with and who first guided them as a puppy into the world of human social life (with all its arbitrary rules and regulations).

But in many ways, the story here reaches back even further: The scientific findings line up with the overall emergence of dogs as a species. The fact that breeds do not make that much of a difference in predicting the overall dog personalities is because breeds

Your older dog should be an ace at following directions and mastering new skills.

Across the Ages

Dogs keep learning throughout their entire life—despite what the old idiom says.

The team from Darwin's Ark found another intriguing, if less surprising pattern, among all the breeds of dogs: Across the life span, they like to learn. In scientific approaches to dogs, one of the common variables examined is "biddability"—how well a dog responds to human attempts to direct them (think of the basics such as "down" and "stay").

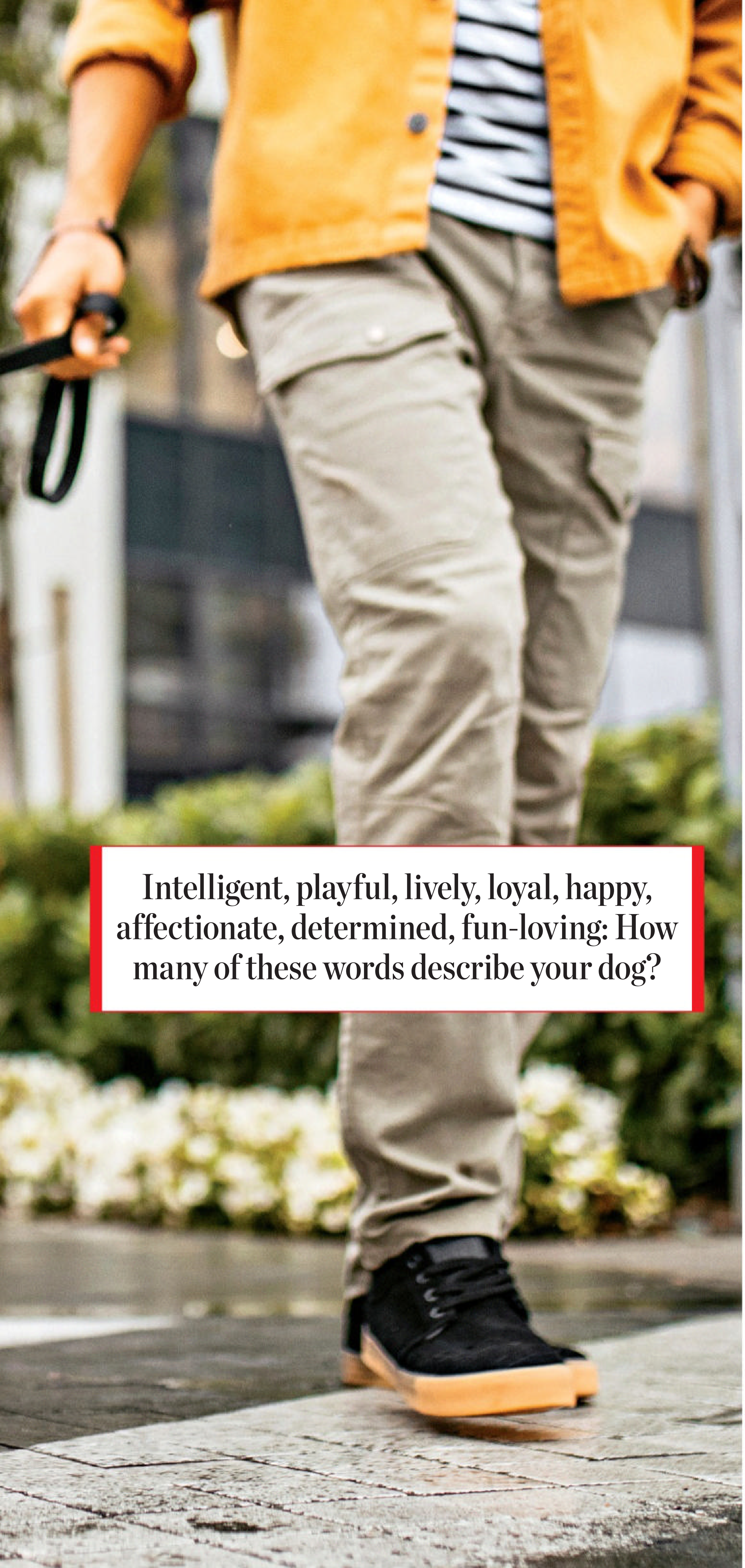
As we would expect, the scores in biddability for older dogs were higher than for the young ones. Indeed, it is difficult to get a puppy to listen to us or, in essence, to understand us as humans (dog moms seem much better at guiding their pups!).

This is the more general issue that the broader study rested upon: How well do dogs understand our human communication? After all, for any of us to understand the actual nuances of human communication is a long road. For humans and dogs alike, it takes a while to "get" what it is that our fellow humans are up to and what they might be expecting from us. Part of the challenge is that there are many contradictions between our words, tone of voice and body language. We say one thing, while our actions tell a different story. And dogs, too, have to work with these far-from-perfect processes.

The old ideas about the human owner as an "alpha dog" showing dominance has only served to hinder communication, creating confusion on top of everything else. So before we get upset by the fact that our dog doesn't follow directions or end up blaming their breed, we might take a pause to look at how consistent we ourselves are in what we are trying to communicate.

As with all learning, small steps in training make for good progress, especially when both the human and the dog are adapting to each other. This is what we have been doing as a species for tens of thousands of years. The biological potential for us and dogs to work together, to live together and to cooperate is there. A wolf cub won't work in this setup, but any dog pup has this potential. As many dog trainers like to say, let's do our part to "set them up for success."

Treating your canine companion with kindness will do more to shape their temperament than their breeding.



Intelligent, playful, lively, loyal, happy, affectionate, determined, fun-loving: How many of these words describe your dog?

are quite new, relatively, with most having been created in the late 1800s. Indeed, the breeding practices that we are now familiar with only emerged in Victorian-era England, when people began to associate social status and prestige with "purebred" dogs. This was all part of the enthusiasm we humans have for controlling nature to ever greater extents.

A SPECIES APART

The real change occurred when dogs evolved from wolves—earlier in the evolution of canine species. This is the big difference, and the one that will predict whether a pup has the potential for life in human society or not.

While dogs and wolves today share some 99.96% of their genetics, the two species are distinct. With proper guidance and a little bit of training, any dog puppy can learn to live with humans, whether in urban or rural places. Indeed, dogs as a species are biologically sculpted for this shared life journey with humans across cultures. But wolves are not. It doesn't matter if you raise a wolf cub by hand before their eyes are even open (thousands have done this); you simply will not end up with a canid that can go to the park with you.

This is the case because of the degree to which humans have been interacting with the lineage of canids that dogs come from for over 30,000 years or even longer. Ancient bones from Europe and Siberia tell a clear story of change over time. In comparison to wolf remains from the same era, the skulls of these early dogs are shorter, the teeth more crowded and the bodies smaller. Gradually, over time, their actions changed too, and today's dogs are, first and foremost, still dogs more than representatives of any given breed. What the current study shows is that the dog's fundamental nature is shared across breeds and all those happy sweet mixtures we call "mutts."

REFLECTIONS

Like Owner, Like Pup

To their benefit or disadvantage, your pooch's feelings and behavior may strongly mirror yours. **BY MARK TEICH**

For your dog, looking into your eyes is like peering into a mirror to see themselves.

Show your pet a steady dose of love and the emotion should be returned.

My late cockapoo Connor used to react blatantly to my moods, voice and facial expressions. I was aware of this and played with it. Whenever I was about to take him out, I'd approach the door and blurt excitedly, "We're going for a walky-walk!" and he'd hurtle off the couch or floor and tear full speed to the door. At other times, I'd put on a song and happily dance around the room, and he'd kind of dance along with me, but really putting his legs up on me to stop and reclaim me, nonplussed by this sudden wild inexplicable activity.

Yet other times I would forget myself around him and get angry at someone or at the world, swearing loudly or just looking frighteningly enraged, and this would so unnerve him that he'd run to my wife in another room for shelter and succor.

YOU ARE YOUR DOG'S MODEL

I regret those moments, especially now that research is showing how seriously dogs may be affected by and reflect their owners' attitudes and actions. For example, in a 2021 study out of the School of Veterinary Medicine at the University of Pennsylvania ("Penn Vet"), the investigators found that for dogs with behavior problems that were enrolled in an intervention program, their owners' personalities and their level of attachment to their owners played a significant role in whether they improved or failed to improve their behavior.

"This study observed the effect of owner personality on dog behavior," says animal behaviorist Stanley Coren, PhD, professor emeritus in the department of psychology at the University of British Columbia. "The bottom line is that dogs respond to the environment around them, and that is basically determined by the owner."

THE BIG FIVE

The researchers tested each dog using the C-BARQ (Canine Behavioral Assessment & Research Questionnaire), a well-established, standardized behavioral evaluation tool. In addition to measuring the level of dog-owner attachment, the researchers tested the owners for what psychologists call the "Big 5" personality traits, the most basic dimensions of personality: extroversion (whether the person is outgoing and sociable versus solitary and introverted); agreeableness (whether or not the individual is warm, cooperative and considerate); conscientiousness (whether or not the person is organized and reliable); neuroticism or emotional instability (whether or not the individual is anxious and moody); and openness to experience (to what degree the individual is curious, imaginative and intellectually flexible).

One of the key findings concerned the owner's openness to experience, according to Penn Vet animal behaviorist James Serpell, PhD, the creator of the C-BARQ and a co-author of the study. "This personality trait is associated with people who are open to new ideas, not conservative, and those owners' dogs showed significant improvements over time," notes Serpell. "That makes sense, since if they're going to a veterinary behaviorist who is telling them the possible source of their dogs' problems, and giving them new ideas about how to handle those problems, people who are open to new ideas would respond positively and have a positive effect on the animal."

"Really, the key dimension of openness is intelligence, with some creativity stuck in," says Coren. "Intelligent people poke around and get info and have new experiences, and they listen to new ideas. They have the best chance of positively affecting their dog's behavior."

Extroverted owners are more likely to see decreases in their dogs' fearfulness and touch sensitivity.

Beware: A dog can become so attached to you that he may become jealous.

Choosing a Breed That Fits Your Personality

Some dogs are more affected by their owners than others.

When you want to add a dog to your household, keep openness to human emotion in mind. Do you want a dog who doesn't think twice about your personality and behavior, or one who will become very attached and thus seriously shaped by your moods? Turns out, some canine breeds react more strongly to their owners' personalities than others. Though owner personality and early upbringing impact dogs most (See "Your Dog Is a Unicorn," page 16), behaviorist James Serpell has found that breeds can vary a lot in sociability. Some breeds, he says, are characteristically independent and even aloof, while others show very strong, positive attachments to their owners.

The classic independent breeds, he says, are in the hound group, like the basset hound, beagle and greyhound. "Also some of the so-called ancient breeds, like Akitas and Siberian huskies and Shiba Inus." On the flip side, dogs that deeply attach to their owners are often the breeds that work very closely with humans, such as retrievers, spaniels and border collies, Serpell explains. "These breeds are very tuned into their owners and respond very rapidly to owner attention."

Behaviorist Stanley Coren, PhD, points out that the differences between these two dominant types were once described as soft vs. hard dogs. "A soft dog will listen to you and react quickly to emotional shifts in their owner or individuals around them, while a hard dog is relatively impervious to those kinds of things," he says. Dalmatians, he notes, are a very hard breed, and can handle a harsher kind of training than softer dogs. "A guy in my dog club had previously owned a dalmatian, and when his wife got a Cavalier King Charles spaniel, a very soft breed, his harsh training methods broke the dog mentally."

TOO CONSCIENTIOUS?

For Serpell, the most surprising finding was that the dogs of owners scoring high in conscientiousness had less success in the treatment program. "You'd think that a conscientious owner would be really likely to comply with the treatment suggestions and do all the things required to manage their dog's behavior appropriately, so you would see the biggest improvements," says Serpell. "But instead, they show less improvement in stress and directed aggression over time and in some cases, their behavior got worse."

One possible explanation is that extremely conscientious people may exhibit a kind of territoriality, wanting everything around them to be just so, and not wanting anyone to impinge on what their conscience tells them is right. They may therefore behave in certain ways with others that encourage the dog to show territorial aggression toward unfamiliar people.

"Conscientious people are often really organized, and they may set a rigid plan for behaviors," says Coren. "Things have to go in a systematic way for them, and bringing a dog into it may disrupt their organized lifestyle. They can't tolerate chaos, and they're not willing to modify their preexisting plans." The dog may sense all of this and feel negativity and a kind of rejection.

IDEAL OWNERS

In addition to openness, the best owner traits for dogs appear to be agreeableness and extroversion, notes Serpell. "Generally speaking, it's owners with an agreeable, sociable personality, who get along well with other people," he says. "Their dogs tend to do well."

Furthermore, extroverted owners are more likely to see decreases in their dogs' fearfulness and touch sensitivity (being uncomfortable with petting, etc.) than introverted owners do. "Extroverts like noisy, people-filled environments, so their dogs sensitize to those environments," and tend to become sociable and outgoing like their owners, says Coren.

MAKING NEUROTICS

Conversely, introverted and neurotic owners, those who are shy and retiring and somewhat anxious, have more problems with their dogs. "That may be due to circumstances beyond their control," says Serpell. "If they have an empathic dog, one who is very attuned to them, the dog is going to pick up on their anxiety and perhaps respond to it in a bad way." (See sidebar, page 25.) These owners should do their best to be as outgoing and calm as possible for their dog's sake. "But of course, people with those particular personality types may find that very difficult," says Serpell.

"We know that if kids grow up in a stressful environment, they are much less likely to form healthy attachments to other people in their lives," Coren points out. "The same goes for dogs. Previous research has shown that owners who are high in neuroticism have dogs with stress-related problems." Coren recalls a famous British dog trainer who would talk about how anxiety is "transmitted down the leash," so to speak.

In fact, we know that people who suffer from high stress have higher levels of the major stress hormone cortisol, and just this year a Swedish study found that owners with higher cortisol levels have dogs with higher cortisol levels, too.

An even more alarming finding emerged from the UPenn study. "It really had more to do with mental health than personality," says Serpell. "We found that men with depression are five times more likely to use confrontational and coercive training methods with their dogs in response to behavior problems. This certainly suggests that if you're a depressed man, getting a dog may

Neurotic caregivers may create neurotics, whether they are parenting a child or a dog.

Are you friendly and flexible? Always surrounded by friends? If so, you could make a perfect parent for a new fur kid.

not be the best thing for you or for the dog."

Coren agrees. "Some research shows that people who are the most aggressive and antisocial have vicious dogs. And as one psychologist told me, 'If I have to prescribe Prozac to a dog, somebody has already prescribed it to the owner.'" Depressives can be clingy and suffocating to their dogs, and at the same time, if depression is strong enough, they often may be very inward-focused, and inattentive to what goes on in the dog. "I think some people shouldn't have dogs, in the same way that some people shouldn't have kids," he adds.

TAKING STOCK

Given all this research, it makes sense to look closely at yourself not just before you get a dog but also after you've gotten one. If you're having problems with your dog, maybe it's not her fault. "If you find yourself punishing your dog for relatively trivial misdemeanors, if you're being abusive, it's time to consider your own psychology and think, this is not normal, I shouldn't be behaving like this. Maybe I need therapy," says Serpell.

The golden key to dealing with dogs, says Coren, is the vast research showing the average dog basically has the cognitive abilities and emotional development of a two-and-a-half-year-old child. "If the way you're treating him is inappropriate for a two-and-a-half-year-old human, it's inappropriate for dogs."

"Generally, if you treat your dog the way a toddler with limited language should be treated, rewarding good behavior, ignoring bad behavior and using punitive measures as little as possible, you're going to wind up with a very good dog," adds Coren. "If someone has the mental capacities and social skills to raise a toddler successfully, they have the wherewithal to raise a dog successfully. I think the vast majority of people have these skills."

HEALTHY HABITS

To maintain basic wellness, your pup needs solid nutrition, plenty of sleep and visits to the dentist to take care of her teeth.

PLAYBOOK

5 Ways to Keep Your Dog Well

There's a strategy for raising and nurturing a healthy animal through a long and active life.

Your fur baby needs to get rid of pent-up energy if they are left in the house all day.

Dogs need some unrestricted exercise for muscle tone plus aerobic and heart health.

Veterinary and basic science have come a long way in maximizing canine health in recent years. These surprising insights and tips, spanning from grooming to nutrition, will help your canine companion reach her potential for health throughout life.

1 AIM FOR OPTIMAL MOVEMENT

A lot of dogs are literally held captive in the home. They get one walk around the block twice a day, but they're never allowed to move their bodies and build their muscle tone, or get rid of all that nervous energy, decrease cortisol (a stress hormone) and lower their blood sugar. And that leads to both physical complications and behavioral complications, according to veterinarian Karen Becker, DVM, co-author of *The Forever Dog*. Becker notes a correlation between the longest-lived dogs in the world and the amount of exercise they had—at least an hour and a half a day.

2 ENCOURAGE FORAGING

Many trainers say that you should try to feed your pet with a food puzzle —a toy that makes the pup work to release food—as often as possible, even daily. Idealists among them believe that, especially for working dogs and other very intelligent breeds, the bulk of their eating should be through food puzzles, so they can in a sense earn their keep like they traditionally have through the millennia. Food puzzles can be fun and build confidence, plus they may stop your pet from overeating by wolfing everything down.

3 DETOX YOUR DOG

"Sometimes our dogs are in such toxic environments that no matter how clean you are as a human, you are unable to scrub their bloodstream of all the chemicals they're carrying," Becker says. But "there are supplements that can pull those toxins out of the bloodstream. There are foods that can specifically detox cancer-causing toxins in dogs." If you live in a highly polluted environment, you need to get a good air purifier that removes particulates. If you've got black mold, you need an air filter. If you live in an area with a known water contaminant, filter your dog's drinking water (and your own!).

4 WATCH OUT FOR DAMAGING ODORS

As a corollary, do not surround your dog with overwhelming scents or wash away natural smells. Do not wash your pup with sanitizing shampoos or douse them with perfumes and scented lotions. For a creature whose identity is so firmly rooted in scent, this could cause them to lose their sense of self. While you should generally keep your home free of invasive smells, one study found four scents that can relax your dog: vanilla, coconut, valerian and ginger.

5 ELIMINATE STRESS

We all know that stress can literally make humans ill, but your inner anxiety can sicken your dog, too. Remember, your dog can smell the stress hormone, cortisol, that your anxiety has produced. "They can analyze your entire day," says Rodney Habib, co-author with Becker of *The Forever Dog*. "You could have fought with somebody in the morning and been over it in the afternoon. Yet when you come home in the evening, your dog can smell that fight." The second your dog smells your stress, according to researchers, they become that stress. Instantly, their own cortisol levels go up. So if you can do nothing else for your dog, keep yourself balanced and reduce the stress of life through exercise, yoga, even cooking.

A healthy, well-considered diet can boost wellness and increase your dog's life span.

Giving your dog one bowl of kibble a day is good for her teeth.

EATING

Food Fight

Dry or wet? Raw or homemade? Upscale or inexpensive? How to feed your dog has never been more contentious. Here's what you need to know about healthy canine diets. **BY MICHELE C. HOLLOW**

There's no one right way to feed every dog. In fact, with so many options of dog food to choose from, much of your pet pal's cuisine will come down to his unique nutritional needs, the types of food he enjoys, and your own personal choice.

One thing is clear: Most veterinarians suggest you look for food with an AAFCO (Association of American Feed Control Officials) statement on the bag or can of dog food. AAFCO is a nonprofit group of government officials, veterinarians and scientists in the U.S. and Canada regulating the sale and distribution of pet foods.

According to Erin Katribe, DVM, and medical director of Best Friends Animal Society, "AAFCO denotes that the diet has been formulated according to guidelines that ensure complete and balanced nutrition for dogs. The proper diet provides over 30 essential nutrients including protein, essential amino acids, essential fatty acids, vitamins and minerals."

She recommends choosing a commercially produced, high-quality dry dog food and to feed your dog an amount that maintains a healthy weight. (Many bags of dog food have serving size guidelines on the bag. If you are unsure, ask your dog's veterinarian.) "This can be supplemented with a canned formulation of the same food for variety," she says.

DRY OR WET?

One benefit of dry food over canned is that as your dog chews the kibble, "mechanical cleaning of the teeth occurs," Katribe says. "This can help to slow or prevent dental disease. Canned food contains a higher water content and this may

You can take the food you would have included in a raw diet and cook it to taste for your pup.

be beneficial in certain health conditions or when the water content helps to provide bulk to your dog's diet without increasing the calorie content."

Linda Simon, MRCVS, a veterinary surgeon and consultant at FiveBarks, a website for dog owners, says, "Wet food is best for those who have ongoing urinary or kidney issues. It is useful for dogs who are unwell or prone to dehydration. It's also a good option if a pet has oral pain and is struggling to chew on hard kibble."

RAW OR HOMEMADE?

Raw was a big trend a few years ago. "It is falling out of fashion to some extent," Simon shares. "The main drawbacks include the cost and the associated health risks, both to pets and their owners. Raw food carries a real risk of food poisoning from bacteria including salmonella, E. coli and campylobacter."

Another choice is to cook for your dog. This works as long as you include all of the essential nutrients, proteins, vitamins and minerals in the food. Katribe suggests talking to a veterinary nutritionist or your dog's veterinarian if you go this route.

UPSCALE OR INEXPENSIVE?

The most expensive food in the store is not necessarily the healthiest. "In truth, all complete dog foods on the market should meet a dog's nutritional needs," Simon says. "When we spend more money, we are often paying for a higher meat content and more expensive ingredients such as fresh fruits,

Dogs are omnivores and are designed to eat both meat and plant-based foods.

fresh vegetables, probiotics and supplements. We are also paying for a marketing campaign and fancier packaging."

She advises her clients to buy the best quality food they can afford without worrying if they can't stretch to a more luxury brand.

PRESCRIPTION DIETS

Certain medical conditions require prescription veterinary diets to manage your pet's health concerns. They include foods for dogs with the following medical problems:

Human Foods You Can Feed to Your Dog

Be careful what your pet gets from your table.

You sit down to dinner and your dog puts his chin on your lap and stares intently. It doesn't matter that seconds ago you filled his bowl with dog food. He wants your dinner.

"Dogs should be fed dog food," Linda Simon, a consultant with the online site FiveBarks, says. "While owners may think they're doing right by offering their dogs a diet of chicken and rice or steak and pasta, these diets aren't nutritionally balanced."

She suggests feeding small amounts of chicken, turkey, beef, rice, pasta, some fruits and vegetables occasionally. "These work well as treats," she says.

The problem with giving only human food to your dog is "many diets lack vitamins and minerals including iodine, calcium and magnesium," Erin Katribe, DVM, says. "Homemade diets are an option for some, but many owners struggle to get the balance right to meet nutritional requirements. And the diet will need to be tweaked as your dog gets older and his needs change." These human foods, though, are safe for your dog.

Apples
Contain fiber, potassium and vitamin A. Remove the core and the seeds.

Blueberries
High in antioxidants.

Carrots
Both cooked and raw, they are low in calories and rich in fiber, potassium and vitamin A.

Green Beans
Contain omega-3 fatty acids; vitamins A, C and K; calcium; iron; folic acid and fiber.

Pumpkin
Rich in fiber and contains vitamins A and C. It's good for your dog's digestion.

These foods are lower in calories than commercial dog treats. As with any diet, too much of a good thing is not healthy, so limit quantities.

Dogs can eat apples, but not grapes.

- Allergies
- Arthritis
- Cancer
- Dental Issues
- Diabetes
- Gastrointestinal Issues
- Heart Disease
- Kidney Disease
- Renal Issues
- Skin Issues
- Weight Management

You can purchase prescription diets from your dog's veterinarian.

CAN YOUR DOG BE VEGAN OR VEGETARIAN?

Technically, the answer is yes. However, Simon believes that "this is not a route most veterinarians would advise. Dogs are omnivores and are designed to eat both meat and plant-based foods. They enjoy the taste of meat and have a high protein requirement, especially when growing or if they are an active breed."

If you are vegan or vegetarian and you want your dog to be as well, then have a talk with your veterinarian to make sure you are giving your pooch a balanced diet that is rich in protein. Dogs definitely need amino acids in their diets, which are the building blocks of protein.

It is possible, though, for your pet to eat a protein-rich vegan or vegetarian diet. The tricky part is finding the right mix of food, since not all proteins are created equal. Eggs, for example, are rich in complete proteins and can be a good choice for dogs. But most plant proteins are not as complete as those that come from meat, and some of these are harder for dogs to digest than animal ones. On the positive side, a plant-based diet will be lower in fat than a meat-based one.

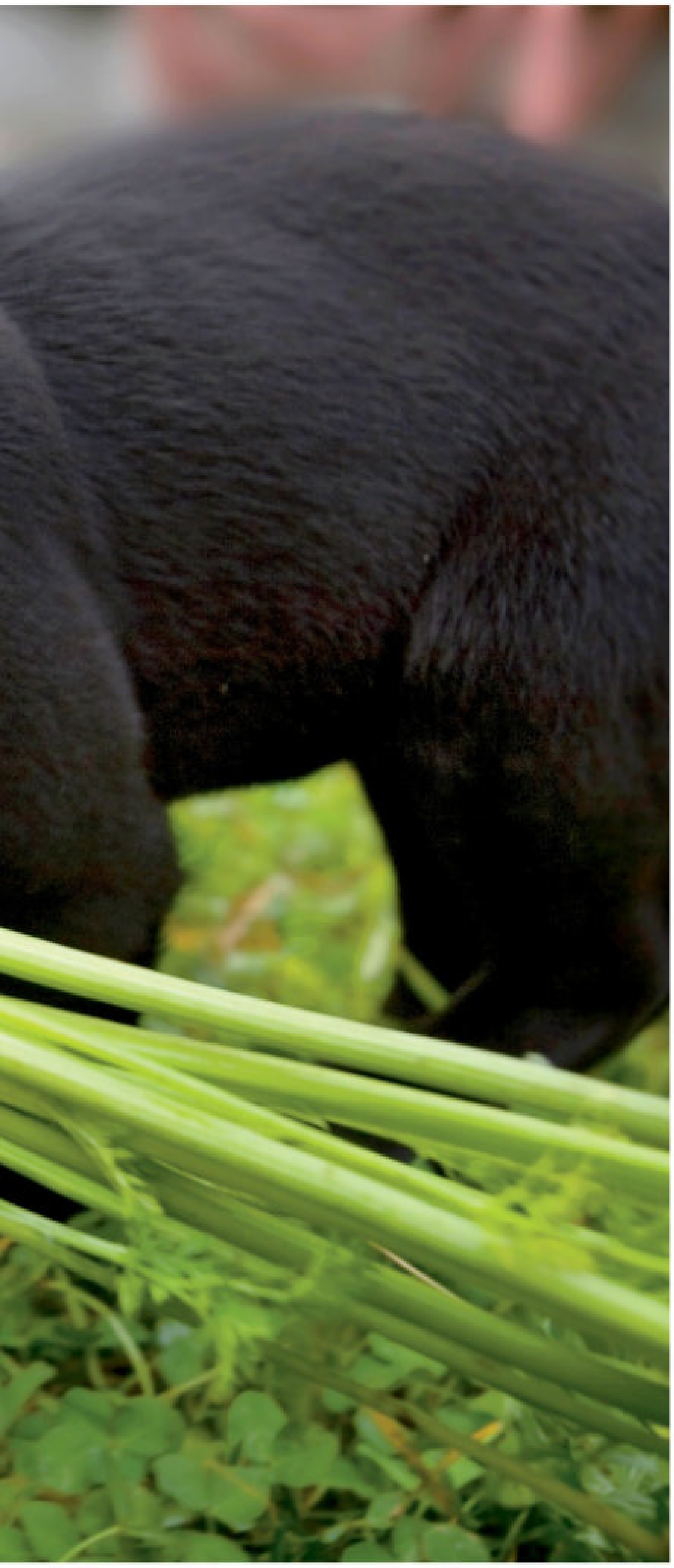
Do a thorough check at your favorite pet store, as a handful of pet food manufacturers do sell already-packaged vegan kibble and canned wet dog food, which may be an easier alternative than trying to DIY. If you put your dog on a vegan diet, be sure to look at his coat. It's generally a good indicator of whether he's getting a sufficient amount of essential fatty acids in his diet. A dull or scruffy looking coat or one with flaky skin can mean your dog needs more essential fatty acids in his diet.

"Research into these diets is ongoing," notes Katribe, who also works with the Humane Society of the United States Rural Area Veterinary Services program. "Some data suggests these diets are equivalent or may even be superior to traditional diets, although these retrospective studies have many variables that are uncontrolled. More research is needed before veterinarians can recommend this for all dogs."

Raw carrots make a delicious and healthy snack for your dog.

MAKING THE DIETARY SWITCH

If you decide to change your dog's diet, be it from cooked to raw or from meat-based to vegan, make the transition gradually over several days or even weeks to avoid an upset stomach or other adverse reactions. "Diarrhea is common with abrupt diet changes," Katribe says. "Even if it's just a change between different brands of food."



Items to Avoid at All Costs

These human foods are sure to make your pooch sick.

Sometimes not sharing is caring. "Certain human foods can be toxic to your dog," Erin Katribe, medical director at Best Friends Animal Society, says. "The specific effects depend on the particular food. Many of these foods can be fatal if enough is ingested."

It's important to look at other factors. Katribe not only points to foods that are toxic, but to those that can cause upset stomachs or severe life-threatening pancreatic inflammation in some dogs. "Examples include anything particularly rich or fatty, like oils or high-fat dairy and meat products," she says.

Another category of foods to avoid includes "foods that pose a risk of mechanical obstruction," she says, "like corn cobs and bones."

Bones and corn cobs can splinter and cause serious intestinal blockage. Katribe also recommends avoiding undercooked meat and eggs and unpasteurized dairy because these foods pose foodborne illness risks to dogs. To avoid any serious problems for your pet, be sure to keep your pet far away from the following.

Chocolate

Dark chocolate is especially dangerous as it contains more cocoa than milk chocolate, and can cause vomiting, diarrhea and seizures.

Grapes and Raisins

These can cause vomiting, increased urination and kidney failure.

Onions and Garlic

They can lead to anemia.

Wine, Beer and Cocktails

They can cause difficulty breathing, a slow heat rate, vomiting, drowsiness, fainting, trouble standing and dehydration.

Xylitol

The artificial sweetener can cause liver damage and a life-threatening drop in your dog's blood sugar.

If you suspect your pet has ingested any of these poisons, contact the **Pet Poison Helpline at 1-855-764-7661**

Last night, as my husband and I relaxed in front of the TV, I suddenly grabbed his arm and gestured to our lab mix, Rio, who was sprawled out on his bed, fast asleep. His tail was thumping up and down. “He’s ‘sleep wagging!’” I whispered, while we grinned at each other.

I love watching Rio wag his tail while he’s sleeping because he must be feeling happy even though he’s unconscious. I’ve always assumed he’s dreaming and wonder what he’s dreaming about. In this instance, we had just returned from a weekend camping trip. Was our dog dreaming about a hike, or swimming in the lake? Maybe he was thinking about a friendly dog he met on the trails, or snuggling in the tent, or dinnertime.

Rio has always been an active sleeper. Sometimes he twitches, with his paws motoring back and forth in what we’ve dubbed “chasing bunnies.” Other times he’ll let out a growl or a little woof. Is he playfully defending the yard from a squirrel in his dream? Or is he having a nightmare? Could he be recalling the dog who jumped out of the window of a parked car and attacked him?

Then there’s the core question: Is my dog actually dreaming, or is it all in my head?

DO DOGS DREAM?

The answer is yes, according to Matthew Wilson, a neurobiology professor at Massachusetts Institute of Technology’s Picower Institute for Learning and Memory. Wilson’s groundbreaking scientific research found that rats dream and replay memories, which has implications for dogs and other mammals with the same brain structures.

“The question of whether animals dream is complicated by the fact that we can’t get them to tell us what they were dreaming about,” he says. “So we need some way of actually directly interrogating the brain and saying, ‘Is the brain—during sleep—also processing information about experiences they’ve had, things they’ve seen, things that they’ve done?’”

Because your dog is attached to you, it’s likely that you play a starring role in her dreams.

If your pup is asleep, resist the urge to rouse her and disrupt a dream.

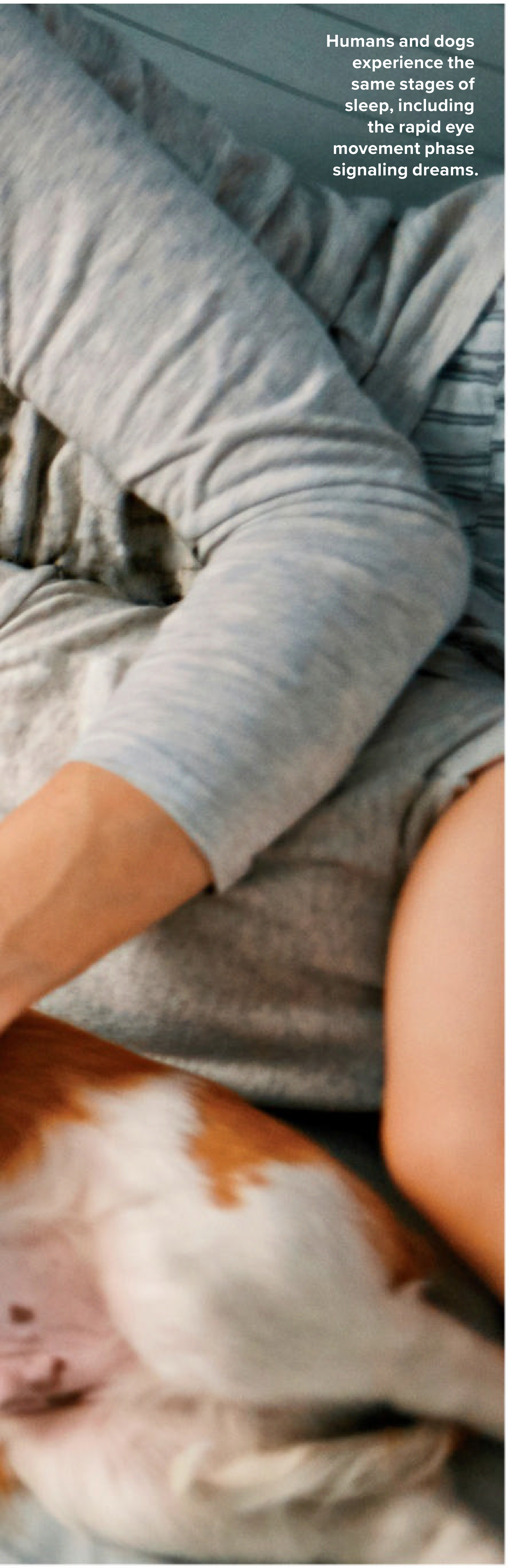
NOCTURNE

Dreamland

Yes, your pet drifts there, and here’s why it matters.

BY JEN REEDER

Sounds played while they're asleep can infiltrate dogs' dreams and profoundly influence their content.



Humans and dogs experience the same stages of sleep, including the rapid eye movement phase signaling dreams.

The research team inserted electrodes into the rats' brains and recorded the patterns of brain activity that occurred in the hippocampus—the part of the brain that captures information about our experiences—while the animals were awake. "It's sort of like recording a movie of the experience," notes Wilson.

Then, when the animals went to sleep, the researchers monitored their brains to see whether the patterns occurred again.

"We can record in areas like the visual cortex and see the patterns that correspond with what they see," Wilson explains. "And what we find is, during sleep, those patterns reoccur. We see the same patterns and the patterns in the same sequence as though the animal is moving through the world and seeing the images that were associated with that. That's as close as we can get to identifying what animals might be experiencing during sleep—what we would call dreams. So we can say the animals experience these things as well."

Wilson finds it interesting that animals—in particular, mammals such as rats and dogs—have the same kind of sleep that humans do. It can be broken into two different stages: rapid eye movement (REM) sleep, and non-rapid eye movement sleep.

REM sleep, also called paradoxical sleep, is the stage in which brain activity generally looks like the brain is awake; people wakened from REM sleep report having dreams. Wilson and his colleagues found brain activity in the rats during REM sleep corresponded to their experiences, such as navigating a maze.

"It's as though the animal is actually running or actually moving through space, having these experiences," he says. "That relates to what people might think of when they're watching their dog. Your dog's asleep, and you suddenly see these periods where their paws might start to move, and you hear their half-vocalizations. And you think, 'Oh! They must be dreaming about chasing squirrels or running around.' That would be these periods of REM sleep, where the dream content also includes movement."

There are important reasons to care about why and how dogs and other animals—including humans—dream that go beyond simple curiosity, according to Wilson. For starters, a great deal of research suggests that memory processing during sleep or dreaming performs some critical functions and is what the brain uses to make sense of the world. "Sleep is designed to try to make sense of complicated things," he says.

One critical way this impacts dogs is social interactions. When training a dog to "sit" or "come" when cued, we might say the word and use a hand signal, then click a clicker or say "yes!" while offering a treat or praise as a reward. But dreaming helps the learning go beyond rote repetition and into understanding the relationship we want to have with them, he explains.

"You're trying to teach them to be a good social companion that doesn't jump up on you or your friends or doesn't run ahead of you when you're walking. That's what they're trying to figure out," he says. "And that's where sleep contributes, I think, in a unique way."

Allowing our dogs to have quality, uninterrupted sleep is a key component of helping them grasp big-picture concepts. "In studying animals, we see that they have dreams and they do have value in learning. If you disrupt sleep, or you disrupt the dream content in sleep, you can selectively interfere with effective learning," Wilson notes.

IMPACT OF SOUND

Experiments have also shown playing sounds during sleep

Sweet Dreams

In order to enrich our dogs' lives so they have pleasant memories to dream about—as opposed to stressful nightmares—take note of the following tips.

Do What Your Dog Really Likes to Do

Does he like to sniff? Then do nose work or tracking.

Focus on the Positive

Try to find at least 10 things that your dog does correctly each day and reinforce them.

Accept Him for Who He Is

Sometimes we want our dogs to greet people, to walk for miles or to love going out to eat with us. But some dogs are homebodies. Accept who your dog is and then find things that you can do together.

Keep Your Dog Busy

Dogs aren't made to work 24/7 but they do like to have hobbies. Games and quick training sessions can help.

Give Your Dog a Break

Everyone, including dogs, need a space they can go to get away from the chaos of life.

can influence dream content—something unsurprising to humans who have had our environment affect our dreams.

"If you're cold, your dreams might be about floating away on an iceberg or those kinds of things," Wilson says. "And we can record the same thing during sleep in rats. By playing sounds, for instance, that were associated with things when they're awake, we can see that those sounds then trigger replaying dream content that's associated with those. So in a sense, dogs are probably doing the same thing. The things that they hear are probably influencing the dreams that they're having."

Sounds are particularly effective as an environmental factor in influencing sleep and dreaming because the auditory cortex—the part of the brain that processes sound—is just as active during sleep as it is while awake, Wilson maintains. So though a dog might not seem to respond to what he's hearing, his brain is processing it.

"In principle, you could influence their dreams and influence their processing by telling them to do things in their dreams. If you tell them to sit in their dreams, they're probably going to sit," he says.

However, Wilson cautions that the downside is that the brain vigilantly listens for sounds that might be important, such as a threat from predators. So certain sounds might wake up the dog—and the best sleep is during a period of minimal arousal with no sounds or lights.

"My attitude toward it is: Evolution has designed sleep to work well. If that's how it's designed to work, then I would just let it work. Good-quality sleep leads to healthy brain function," he says. "There's a metabolic value to it. It's really important for not just processing memories but also keeping the brain and body healthy. So I wouldn't encourage people to disrupt their animals' sleep."

We also shouldn't interrupt our dogs when they're daydreaming. Wilson notes that non-REM sleep is directly related to periods of quiet wakefulness, so resting is also valuable for planning or good decision-making.

"I think you could expand the charge of letting sleeping dogs lie to 'let resting dogs lie,'" he adds.

CREATE A SAFE SPACE FOR YOUR POOCH

To that end, we should create a "sanctuary space" for our dogs in our homes, says Lisa Radosta, DVM, a board-certified veterinary behaviorist at Florida Veterinary Behavior Service.

Memorable waking events make patterns in the brain that replay during dream sleep.

"A sanctuary space is a place away from the main living area where the pet can go to relax. It should be comfortable and familiar to the pet," she says. "My dog's sanctuary space is my bedroom. We don't spend a lot of time in there so it is super quiet and dark.... He goes there and sleeps whenever he wants. We don't disturb him."

Many pet parents find it distressing when their dog heads to another room, but we shouldn't be offended—he might just need a break.

Playing soft music and avoiding things that are jarring, such as a loud TV show, can also help our dogs sleep, though Radosta notes that some dogs sleep through practically everything: "It's about knowing your dog."

Still, when dogs are lying down or sleeping, no one should bother them. "Don't reach for them and don't let your kids climb on top of them," she advises. "Let's be realistic. Do you want someone climbing onto you when you are snoozing? That kind of interaction can create an anxiety about sleeping or being in that spot. If your dog doesn't feel safe, how can he get the deep sleep that he needs?"

Radosta says that if dogs replay the day's events while dreaming and use sleep to learn and process social interactions, that's just one more compelling reason to use positive training methods instead of more punishment-based techniques.

"The dog would continue to process traumatic interactions as they dream," she says. "Who would want that? However, that has nothing to do with dreaming and more to do with, why would we want an animal we love to experience trauma?" She emphasizes the importance of allowing our dogs to get the sleep that they need and deserve.

"I know they are cute. My dog is the cutest," she says of her beloved dog, Maverick. "But let sleeping dogs lie."

A version of this article was originally published on VetScoop.com.

MOUTHING OFF

Best Bite

Good dental care is critical to your dog's overall well-being. Here are tips on how to keep canine teeth healthy. **BY MICHELE C. HOLLOW**

An overpowering whiff of bad breath emanating from your dog's mouth is a clue that something is off. It's a sign of bacterial buildup, which lets you know to take action because sometimes foul odors are the result of diseases such as diabetes or kidney failure.

Clues are helpful. However, some dental illnesses are harder to spot and dogs are experts at hiding pain. In that case, the only way to find a problem early is through a professional dental exam. "Dental care should be part of your dog's annual veterinary visit," according to veterinarian Genna Mize, DVM, of Virbac, a pharmaceutical company that studies dental care for dogs. "Your veterinarian can find something you might miss such as periodontal disease."

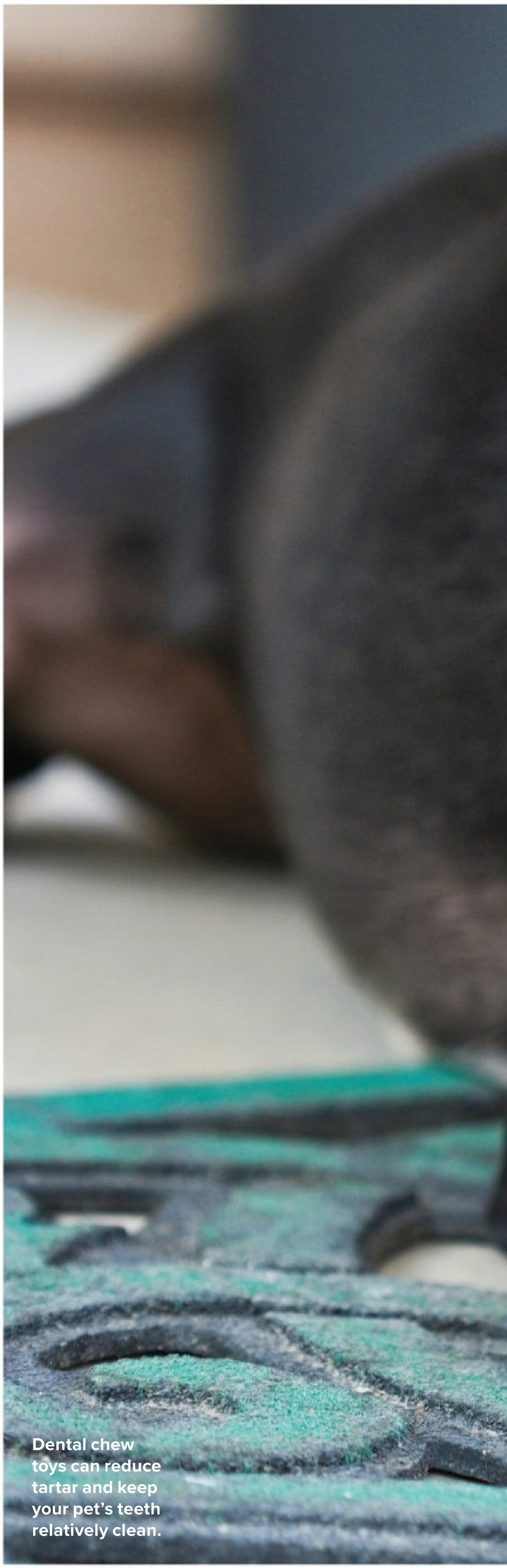
It's easy to miss this gum disease in its initial stages in both humans and dogs because it forms below the gums. According to a report in the *Journal of Animal Science,* periodontal disease is the most common clinical condition in adult dogs and the most untreated health condition in dogs overall.

Like other dental conditions in dogs, odor can be a clue. But in the case of periodontal disease, the smell is detectable only once the condition progresses to the point where it's visible and quite advanced. What makes this worrisome is that "when bacteria in your dog's mouth enters the bloodstream, blood carries bacteria from the mouth to other parts of the body," Mize says.

Megan McCarthy, DVM, staff veterinarian at the Best Friends Animal Society Lifesaving Center in Salt Lake City, agrees. "Healthy teeth and gums affect the well-being of your dog's entire body. If the teeth are infected, each time the dog eats or chews, this infection and debris can enter the bloodstream and cause heart disease, liver disease and kidney disease." Poor dental care can also cause gum recession, pocketing around the teeth, abscesses and infection surrounding the teeth and tooth loss.

PROFESSIONAL CLEANINGS

Most dogs require dental cleanings. "This is very individual and depends on the breed, home dental care, size of the dog, diet and genetics," McCarthy says. "Some small or toy breed dogs can benefit from a dental cleaning at least once yearly while some large breeds may go several years in between. Dental cleanings are performed under anesthesia so the teeth can be cleaned well beyond



Dental chew toys can reduce tartar and keep your pet's teeth relatively clean.

Periodontal disease is hard to detect, yet it afflicts up to 85% of all dogs over age 3.

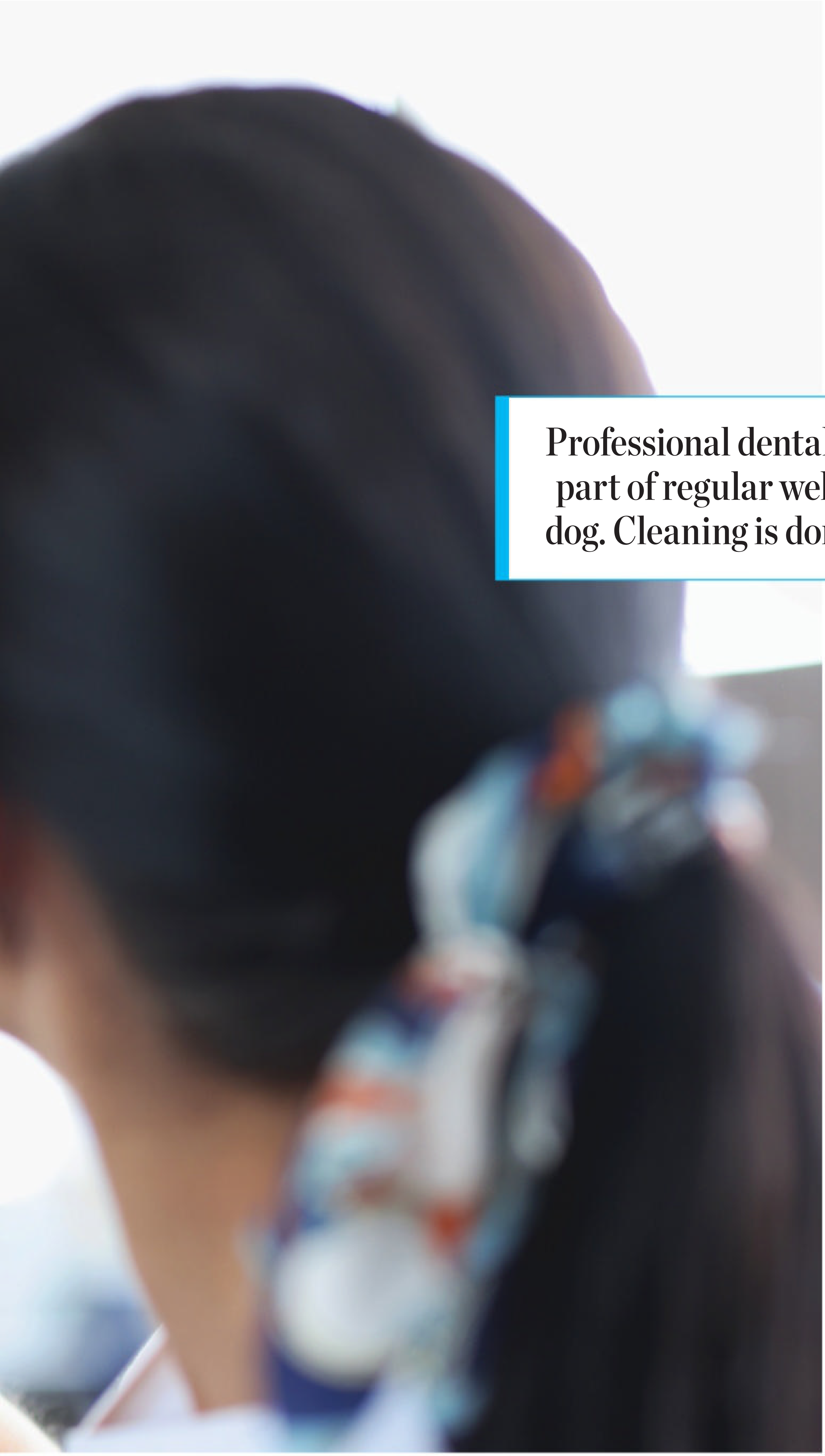
Before you can check your dog's teeth at home, you must get him accustomed to the feel of you touching his teeth.

the gum line and polished to keep them healthy."

AT-HOME DENTAL CARE

Before you attempt to brush your dog's teeth, get him used to your touch by gently moving your dog's lips up and down. Then softly touch his teeth with your hands in an up and down motion, as if your hand was a toothbrush.

"You can also put peanut butter on your fingers, which dogs like," Mize says. "And when he lets you put your fingers in his mouth, tell him what a good dog he is."



Professional dental checkups should be part of regular wellness care for every dog. Cleaning is done under anesthesia.

"Once your dog gets used to this, you can introduce a dental wipe," Mize adds. "You can wrap the dental wipe, specifically for dogs, around your finger and make the same motion as a toothbrush."

Dental wipes for dogs remove plaque and tartar and clean your dog's breath. You can find them at pet retail stores.

START A ROUTINE

McCarthy and Mize recommend brushing your dog's teeth at home. "Daily is recommended," Mize says. "However, two to three times a week also works because not all dogs will cooperate."

Purchase a dog toothbrush from your veterinarian or local pet store. Use a soft bristle toothbrush to remove plaque, bacteria and residue. A soft bristle toothbrush does the job without damaging the enamel and gums.

"Make sure you use toothpaste made for dogs," Mize emphasizes. "The toothpaste we humans use is not safe for dogs to swallow. And doggy toothpaste comes in a wide assortment of flavors including chicken and fish."

Ask your veterinarian to show you how to brush your dog's teeth. "You can also watch a YouTube video that demonstrates how to [do this]," McCarthy says. "The second best thing to brushing your dog's teeth are dental chews, dental diets and dental treats."

DENTAL TOYS AND TREATS

According to a study in the *Journal of Animal Science*, dental chews certified by the Veterinary Oral Health Council are effective in decreasing tartar on a dog's teeth. "These chews can help prevent and remove tartar and are good for a dog to chew on as long as they actually chew them rather than swallow them," McCarthy says.

Dental toys can also be helpful in preventing tartar and "come in handy for teething puppies," McCarthy says. "You want to choose a dental toy that has a little give to it, one that you can bend a little and indent with your fingernail. Kong and Nylabone make some nice dental dog toys. Just make sure they are not too hard. Some toys and bones can be too tough for dog's teeth and can cause tooth fractures or breaks."

SPECIAL DIETS

Kibble can help remove plaque from your dog's teeth. When your dog chews large bits of kibble, the kibble breaks apart and scrubs the surfaces of your dog's teeth. While this helps keep teeth clean, it's important to talk to your dog's veterinarian before switching to a kibble diet. Most dogs eat two meals a day. You might want to give your dog kibble for breakfast and wet food for dinner.

Dental treats are another option. Make sure your dog chews them in order to remove plaque. This strategy will be more effective if you limit the number of sweet treats you give your dog to one or two a day.

START TODAY

"It's imperative to start puppies right off the bat with home dental care," McCarthy says. "Even though puppies will lose their baby teeth, you have started training them so that when their adult teeth come in, they are used to having their teeth being handled."

Older dogs benefit, too. "Teeth brushing will not remove years of tartar," McCarthy says. "It will help prevent further buildup. In an older dog with dental disease, I recommend having their teeth cleaned with a veterinarian and after one to two weeks, once the gums are less inflamed, you can start routine tooth brushing to slow down the tartar buildup. Space out the time in between dental cleanings with your vet."

Veterinarians perform routine dental care. But to treat a progressive dental disease, you may have to see a veterinarian who specializes in dental care. Ask your dog's regular veterinarian to give you a recommendation.

> When brushing your dog's teeth, use a canine toothpaste with a flavor she enjoys. Add a probiotic dental powder to meals.

A toothbrush with soft bristles is best for dogs and humans alike.

SAFE & SOUND

From microchipping your dog to preparing your pet for potential natural disasters, here's how to help make sure he survives any challenge that comes his way.

PLAYBOOK

5 Ways to Protect Your Dog

It's a dangerous world for our vulnerable pups. But there's a lot you can do to keep them out of harm's way and make sure they're secure.

Rewarding your canine fur baby helps to reinforce positive behaviors.

A dog who can follow your directions will be safer when a risky or unexpected situation pops up.

Whether you've adopted a dog or purchased one from a breeder, you are your fur kid's parent, charged with keeping her safe and secure. These tips can help.

1 USE BOOTIES

Dog shoes are sometimes seen as frivolous fashion statements because, myth has it, a dog's feet are immune to the impact of cold and ice or scorching heat. But booties also happen to protect our beloved canines from frostbite and salt or other chemical deicers on winter streets and the burning hot pavement in the summer months.

2 TEACH YOUR DOG HUMAN LANGUAGE AS EARLY AS POSSIBLE, PREFERABLY WHEN HE IS A PUPPY

It's not just about communicating with you. Teaching some basic human vocabulary (using gentle training techniques and delicious rewards) will keep your dog safe. Start with his name (the more you use it, the more likely your pup will know you are referring to him) and the most basic of all commands: "Sit." Then, most important, are the words that allow your dog to explore safely because, when it is time to stop, he will know to desist and return to you: stay, stop, come and down.

3 DOGPROOF YOUR HOME JUST LIKE YOU WOULD CHILDPROOF IT

Only leave out things your dog is allowed to play with. Dogs are not humans, though they live in our homes. We must make it easier to live in our environment and play by our rules. And don't punish if your pooch tries to play with something off-limits, such as a TV remote. Simply redirect her to a toy that she is allowed to chew and play with.

4 IF YOU HAVE A DOG FAMILY, SCOUT THE GROUP FOR BULLIES

If you have a family of pets and suspect one of them may be bullied, do a consent test: Separate the two animals, then let the dog that seemed to be the victim go. If he runs back to the other to keep on playing, that tells you it was just fine. If not, then keep those puppies separated, and find a way to keep your older dog safe by giving him a "room" or space of his own.

5 AVOID THE HIDDEN HAZARD OF STICKS

Be careful if your dog runs or swims with a stick in her mouth. Experts say that this seemingly innocuous activity can end in terrible tragedy. Veterinarians report a steady flow of dogs who have accidentally impaled themselves with sticks. "As soon as you say the trigger word— stick— the first place I'm looking is the mouth and the back of the throat. Unfortunately, sometimes it takes sedation to see far enough back into the throat where the injury is," Alaskan veterinarian Paige Wallace, DVM, writes in her blog. Stick injuries prevent dogs from eating and may become badly infected as well. To avoid this problem, Wallace suggests supplying your yard and car with toys your dog can play with easily. That way, it will be easier to resist the urge to toss a stick to your dog.

Take your dog and his needs into account when creating your family's emergency evacuation plan.

Following a flood, a dog might need to swim through debris to get to safety, but that is not always the best plan.

SAVE THEM

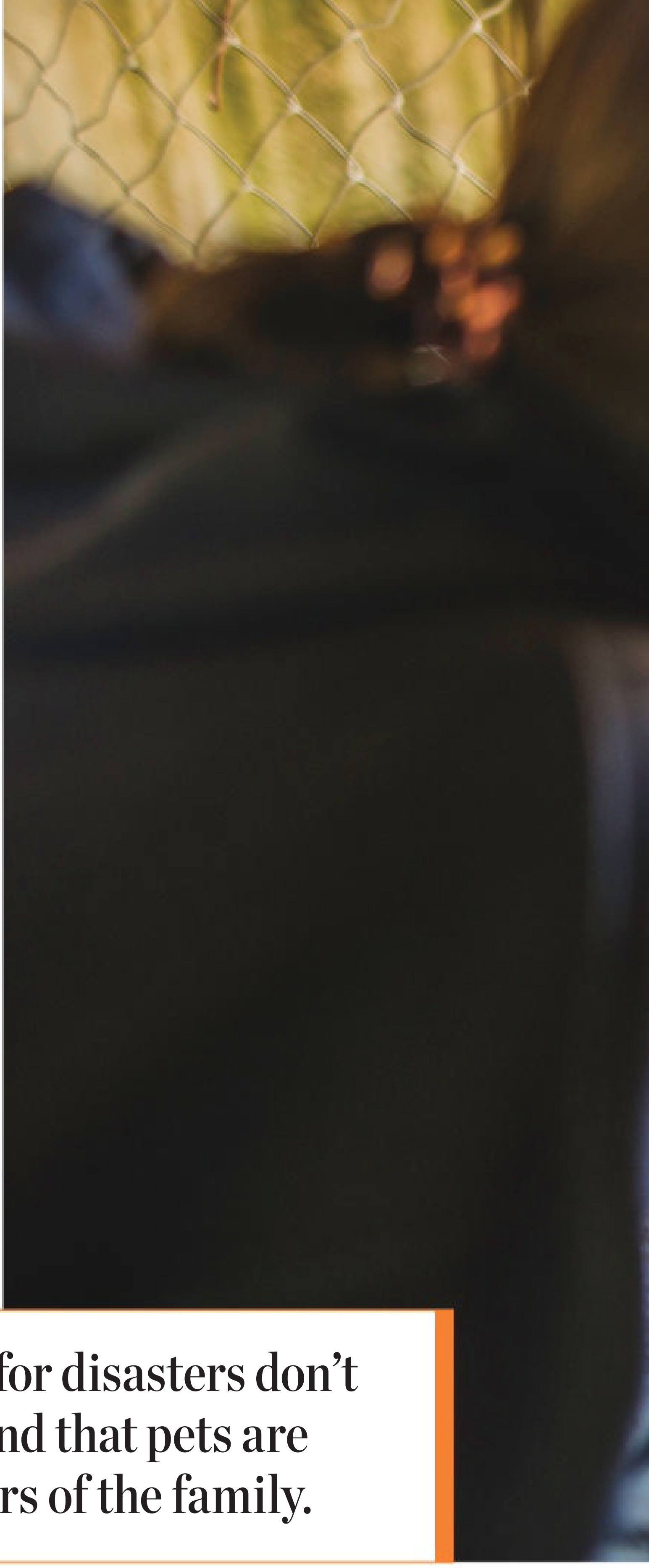
Stormy Weather

Here's how to make sure your dog doesn't get hurt, lost or worse during a natural disaster. **BY MARK TEICH**

You're at work when the storm warning comes. Your wife is picking up the kids at their school, but since the weather is bearing down on your neighborhood, they have to head to a shelter. Your plan was to join them there after getting your dog from home, but the storm takes a sudden turn for the worse, and the odds are poor you'll get him and then to the shelter in time. You're faced with a horrible choice.

This scenario is just one of the countless situations that end tragically for so many dogs and causing heartbreak for families after a natural disaster hits. Sometimes the pets die in the home, and sometimes, if they have access to the outdoors, they flee in terror and are never found again. In fact, one in three dogs are lost at some point in their lives. "There is no systematic way of tracking lost and found pets during disasters, and it's something that is needed," says Ashley Farmer, co-author with disaster planning expert Sarah DeYoung, of *All Creatures Safe and Sound: The Social Landscape of Pets in Disasters*. "In the research we did, we talked to some pet owners who found their lost pets, and some whose pets were never found, likely having perished in the disaster."

Out of desperation, she says, many pet owners turn to social media groups to post about lost and found animals, or to share information from local shelters about found pets. These efforts do not have a high success rate, so they also resort to any other measures they can think of. "After a wildfire in California, we came across a tent in a neighborhood that had pictures posted of pets that were reunited with owners and also lost pets never found."



WHY IT HAPPENS

There are various reasons that pets get cut off from families in disasters, notes Farmer, a professor of criminal justice at Illinois State University. “Sometimes they are left behind because people mistakenly assume they will be able to return quickly from wherever they stay during the emergency. This is one of the reasons that people try to reenter disaster zones before it is safe.” Other times the owners are at work and can’t get home to their pets in time. “And yet other times pets just get stressed and scared and run off,” before anyone can get to them, “because the disaster presents such an unfamiliar environment to them,” Farmer explains.

Making matters worse, many evacuees from disasters end up having to surrender their pets when their homes are destroyed, especially if their emergency housing doesn’t allow for animals.

PLANNING AHEAD IS THE KEY

The best thing you can do to avoid facing such a tragedy is to plan ahead for the myriad things that can go wrong in a disaster. “Have proper pet carriers and leashes always ready to go” for a fast getaway, says Farmer. Having proper identification on your pet, including an ID tag and microchip with the dog’s name, family phone number and address, is also essential. (See “How to ID Your Pet,” page 72.) Having a recent photo of your pet is helpful too. Farmer also strongly recommends implanting a microchip in your dog with an ID number and all relevant contact info; vets and shelters can scan it to identify your dog and inform you they’ve found him. Ideally, register the microchip with a pet recovery service that has access to different microchip databases and technology, and can check against hundreds of registries’ databases.

STRATEGIES FOR DIFFERENT DISASTERS

Stray animals without homes after disasters are at risk of dying due to starvation, wild animals, flooding, fire injury and other threats. Many steps can be taken to protect them before and after they’re lost, however, depending on the kind of disaster.

FIRES

- The Red Cross maintains that the best way to protect your dogs from a fire is to include them in your family plan. When you practice your escape plan, practice taking them with you. Make sure you have rigorously trained them to come when you call. When you evacuate, do your best to keep your dog with you and arrange in advance for a shelter that accepts pets. It’s also a good idea to identify hotels and motels outside your immediate area that accept dogs.
- Just as you prepare a disaster kit for your family, make an evacuation kit for your dog as well, including food and water for at least seven days, a two-week supply of medicines, a week’s worth of cage liners in case your dog can’t get outside to relieve himself, a feeding dish, a water bowl and liquid dish soap, as well as toys and treats to keep him occupied.
- Arrange in advance for a safe place for your dog to stay if you need to leave your home and can’t bring her with you. This not only includes someone who can take in your dog on a temporary basis if you’re displaced for a while or can’t get back home, but also potential permanent parents who can give your dog a good life if something happens to you. Friends, relatives, doggy day care centers and no-kill shelters out of the danger zone are all possibilities, so check with them in advance. Ask your vet for a list of preferred boarding kennels and your local animal shelter if they provide emergency shelter for dogs.
- Make sure one or more potential rescuers that you trust have access to your home (a key, for example) in case you can’t get there in time, and check that your dog is comfortable with them entering your home.

> Officials who plan for disasters don’t always understand that pets are essential members of the family.

If you must take your dog to a shelter during a disaster, make sure you find a no-kill facility.

- When you're away from home, keep dogs near entrances, where firefighters can easily find them. Make sure their collars and leashes are at the ready.
- Affix a pet alert window sticker to your front window with the types and number of pets inside your house. This will save rescuers time in locating your pets. The sticker should also include your contact info and the name and phone number of your veterinarian. If you manage to evacuate with your dogs, remove the sticker or at least write "EVACUATED" across it so rescuers can get on to the work of saving others.

HURRICANES AND OTHER STORMS

- Make sure your dog has an ID tag and microchip, says Phyllis Sollars, who has worked as a volunteer and foster pet parent for Last Day Dog Rescue for five years. "Some storms can destroy or knock down fences, allowing pets to run away, and even if they're not runners, loud noises such as thunderclaps can scare them and cause them to take shelter elsewhere." If these things happen, ID tags and microchips are your best bet of finding your dog again.
- Lightning flashes, thunderclaps and the uprooting caused by hurricanes can seriously terrify your dogs, but there are medications that can help reduce their anxiety. There are also other calming items available, like ThunderShirts, snugly fitting apparel that applies gentle, constant pressure to your dog's body. This can have a calming effect on your dog, the same way swaddling can calm a human baby.
- Make sure you know where your dog hides in fearful moments, so

LIEUTENANT
27
PBCFR
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Firefighters often find they must rescue family dogs who have been left behind.

A shelter offers free veterinary care in Everglades City, Florida, after 2017's Hurricane Irma.

you can find them easily when your family is evacuating.

- If your dog has extreme anxiety during storms, find a certified trainer who can work to desensitize your dog to the noises and flashes and teach them coping mechanisms.
- Engage your dog in any activity that captures his attention, says Sollars. This can distract him from all the loud noises that come with severe weather. Other options for drowning out the noise are running fans or playing calming music. Sollars notes there is a YouTube channel called Relax My Dog that's entirely dedicated to this.
- Make sure your dog is indoors. Never leave a pet outside during a severe storm. If you're under cover, she should be, too. Also, keep your doors and windows shut when you leave your dog alone.
- Keep a light on so your pet doesn't notice the lightning.
- Create a safe space for your dog to go to in loud, frightening moments—it can be inside a crate, under the bed, in the basement or in one of their favorite hiding spots.
- After the storm, check your yard for downed power lines, gaps in fences and other hazards. Keep your dog on a leash outside until you know you've cleared away all debris and the area is safe.

BECOME AN ACTIVIST TO PROTECT YOUR PETS

Another important thing you can do in advance of natural disasters is to campaign for improved evacuation facilities and pet search capabilities. Farmer asserts that government bodies at all levels need to include pets in disaster planning more comprehensively.

"When owners can't bring their pets with them during evacuation, they sometimes refuse to evacuate," increasing the danger for both themselves and their pets, she says. "This will happen even if government organizations tell people to do otherwise." Acknowledging refusal to evacuate as a common reality and making sure information is provided to people about pet-friendly shelter locations would help solve this problem. "It would also be helpful for municipalities with animal control to have pet registries that could help families with reunification," she adds.

Farmer also points out that animal cruelty is exacerbated during disasters. "We see a lot of surrenders to shelters after a disaster, which can lead to free or cheap adoptions, but these canines are often used for things like dog fighting," she laments. "In North Carolina during a hurricane," she shares, "a woman who rescued 27 pets was arrested for practicing veterinary medicine on them without a license."

It pays to look into various aspects of your government and criminal justice system and find out what you can do to improve evacuation access and other protections for dogs during emergencies.

Many dogs, like humans, need to warm up to new people before they can tolerate close interactions.

If a dog is tied up or his or her parent isn't present, say hello from a distance.

CONTACT

To Pet or Not to Pet?

It's important to keep interactions between kids and dogs safe.

BY PETRA EDWARDS AND SUSAN HAZEL

Dog attacks are reportedly on the rise, and some parents may be wondering how to keep interactions between kids and dogs safe—and make sure that everyone is happy.

A review of hospitalizations due to dog bites in Australia found that most incidents involved children who were under the age of 9. Dog attacks involving children often involve the family dog or a dog known to the child. While we need more research around the events leading to these attacks, they're likely a combination of a series of unfortunate events, rather than an inherently "bad" dog. After all, any dog can bite.

Every pet and every child interaction is different, but here we discuss some general tips for good interactions and outcomes.

Just as you wouldn't run up and hug a stranger in the street, you shouldn't do so with a dog, either. It's vital children learn how to approach dogs safely. They should always stop a few feet from a dog they want to pet and ask the responsible handler for permission, before also asking the dog.

You can ask dogs if they want a pat by remembering the phrase, "pat, pet, pause."

1. Pat. Pat your leg to encourage a dog to come over.

2. Pet. If the dog comes to say "hi!," give them a gentle pat on the shoulder or side. Never pet

Some dogs aren't used to kids. Be able to read those signs for safe interactions.

a dog on the head (dogs hate it!). Stand side-on so the dog can always move away.

3. Pause. Stop after three pats (or three seconds), and wait. If the dog reconnects (leans in or bumps your hand) then pet again for another three seconds. If the dog remains still, leans away or moves away, they don't want to be patted at that moment—but you can try again later.

Children and adults alike should pat, pet, pause in every interaction with a dog—even the family dog. And interactions should be short, supervised and managed carefully.

Not all dogs are used to kids. Some may be very social and friendly, but not know how to interact with children safely.

Keep social, friendly dogs on a leash or use a playpen (or fence) to keep both dogs and children safe. Use lots of tasty treats to reinforce a dog's good behavior for keeping four paws on the floor.

Things can escalate quickly if children get excited or if a dog starts zooming around. Keeping interactions short (and supervised) reduces the chance of somebody being hurt.

Be extra careful with very large or heavy breeds, as young children can get knocked over easily.

LEARN TO SPEAK DOG

Dogs communicate well, if we learn to listen. They show signs of fear by moving away, cowering or tucking their tail between their legs. If they flick their ears back, turn their head away or close their mouths it means they're not comfortable. Miss these signs and a dog might growl or bite.

A wagging tail doesn't always mean a dog is happy—"good" wags are midheight, slow(ish), with a relaxed body. Dogs, though, also wag high when tense, or very low when extremely nervous (both signs to say "hi!" from a distance).

Research shows young children find it difficult to identify dog body language—signs of fear or stress—although older children can increase this knowledge with education. It's up to adults to supervise, watch both dog and child closely, and stop the interaction if either isn't coping.

If a dog is prone to biting, the best thing you can do is move away.

How to Handle Aggressive Dogs

Not every pup you come across will be friendly and affectionate. These tips will help prepare you for unfortunate encounters with assertive and potentially dangerous animals.

In the centuries since we first domesticated and trained dogs to be our pets and companions, we've successfully shaped their natural behavior so they can share our lives, homes and environment. But we can't train or breed out all of a dog's natural instincts: Many dogs will protect their space—and some will escalate their response if they feel threatened.

And though many people picture specific breeds as being aggressive, the truth is that any type of dog can attack someone.

IF A DOG IS ATTACKING YOU

Don't Panic

If you see a dog that looks agitated and is running toward you, the most important thing is not to react or scream. Stay calm and avoid eye contact. Move away (out of their space) as easily and slowly as possible.

Straighten Up

If a dog is attacking in full flight, try to stay upright, remain still and call for help. If you have time, placing something between you and the dog (a clipboard, jacket, garbage can) might help. If you end up on the ground, curl up into a ball as tightly as you can. Most dogs have good "bite inhibition." If a dog is scared and an approaching person doesn't recognize the signs, they will likely bite once as a warning but they won't necessarily keep biting if you can move away.

IF SOMEONE ELSE IS BEING ATTACKED

Keep Yourself Safe

If you intervene in a dangerous altercation, understand that you might get bitten.

Distract the Dog

To do this, you can call out from a safe distance, beep your car horn, or spray the animal with a hose if there's one handy and it's safe to do so.

Call 911

If the attack seems like it is escalating quickly, get a first responder involved as soon as possible.

WHAT TO DO AFTER AN ATTACK

Get Medical Attention

Every dog bite will need medical attention (and a possible tetanus shot) to treat the injury and to prevent infection. You should make sure to get yourself or anyone else who has been attacked to the emergency room of the nearest hospital as quickly as possible.

Report the Incident

Most jurisdictions require every dog attack be reported. Local authorities may collect evidence, interview witnesses and follow up. They might impose a dangerous dog order or tell the owner to install or repair adequate fencing around their property to keep their pet contained. Roaming dogs can also be reported and picked up by the authorities.

DEBUNKED

Dog-Training Myths

Try these new tricks for treating stressed-out dogs.

MYTH

Don't try to comfort a panicked dog.

Experts once believed that affection reinforced dogs' fears. Not so, says veterinarian Andrea Tu, DVM. "You absolutely can comfort them. When they are panicking or fearful, it's an emotion. You cannot enforce an emotion like that. If the dog is panicking, and I'm providing comfort, that could help toward changing the dog's emotional response to what is happening next."

MYTH

Use training instead of drugs.

People may be hesitant about using medication to help dogs with phobias, because they don't understand its use, says Tu. "When these dogs are at that level of anxiety, their brains may be so heightened in fear that they can't learn. So addressing the problem with just training is a big misconception." The other side of that coin is that by treating your pooch with just medication, you may not fix the problem, she points out. "You really need both."

MYTH

Punish bad behavior.

When a dog is acting out from anxiety or depression, any punishment (including yelling) will escalate those emotions. That also goes for the debunked training method called "flooding," when you expose a dog to its phobia until they give up. "That is very different from desensitization," Tu says, "in which you expose them to small increments of what might be scary by pairing it with good things," giving dogs a chance to adapt. *—Jillian Blume*

It's important to never punish a dog for growling. Growling is a serious signal (especially around children) and needs to be addressed quickly with careful management and training. However, it is clear communication on a dog's part. Punishing a growl might silence your pet, but the underlying discomfort (or fear) behind the growl will still be there. This means a dog might not give any warning before biting.

Ignoring signs of stress or fear, or finding it funny, puts everybody at risk. Stop troublesome interactions immediately and contact a qualified, experienced dog trainer if needed.

Remember that a dog in his bed, or eating, needs his own space. These are a dog's safe zones—kids should not approach for any reason.

Kids also need their own "safe" space or time away from the dogs (for example, in their bedroom).

Also respect the space of dogs you see in public. Just because a dog is outdoors doesn't mean it's comfortable with strangers approaching. And even if a dog is walking with children, they may not want to meet new children.

If the dog is tied up in front of a shop (or you can't find their parent), wait to say hello another day.

Sometimes pet parents feel pressure to ensure their dog says "hi!" to children, but always listen to the animal, and feel empowered to say no to pats from children. It won't hurt to miss this one interaction, and the experience will serve as a learning opportunity for kids to respect the space of animals.

A version of this story originally appeared in The Conversation. *Petra Edwards, PhD, is a researcher at the University of Adelaide who also works with the RSPCA South Australia. Susan Hazel is a senior lecturer at the School of Animal and Veterinary Science, University of Adelaide, and is affiliated with the Dog and Cat Management Board of South Australia.*

Dogs might not be comfortable with strangers approaching.

SMALL WONDERS

The Secret Lives of Little Dogs

While they may be small but mighty, pint-size pooches have their own safety concerns to consider. **BY JILLIAN BLUME**

It's 9 p.m., and my tiny Yorkshire terrier Buster is busy letting me know it's treat time. He may be only 4.5 pounds, but he stands there barking his orders as if he's a mastiff. He will bark steadily until I do what he wants. But when I call Buster a bully, Colorado-based veterinarian Jo Myers, DVM, says, "Not so fast."

"I think bullying is a word we have to use carefully because of the human psychology that goes into it." Human bullies, she says, act that way because they don't feel good about themselves, and the only way to feel better is to put someone else down. Small dogs act assertive because they have a job to do—to get what they want from you. In that sense, their behavior is more boss than bully.

Most dogs have jobs of one sort or another, Myers explains. But the small dog's job stands apart from breeds such as the Old English sheepdog, domesticated specifically to herd sheep. Instead, the little dog—which is not a product of evolution but rather bred for human delight—focuses their work life on us.

"These small dogs that have so many amazing traits, and that we love so much," are literally a breed apart from the "wild, 45-pound dog with upright ears and a medium hair coat," Myers says. Those larger dogs were domesticated mainly to perform specific jobs for their human caretakers: herding, hunting and guarding are among the roles they fill. They are hardwired to work, she adds.

Small dogs, on the other hand, are not usually working breeds who have different jobs to occupy their time and attention. "But they still have all of the emotional capacity,

This athletic Pembroke Welsh corgi could wind up with serious health problems, including bone and joint disease.

The small dog is endlessly cute, luring her human into a life of friendship, service and devotion.

personality and intelligence to be highly motivated to manipulate your behavior." In a sense, that's their job, Myers explains. They're hardwired to make sure you behave the way they want you to. "Their level of dedication to that job is the same as the Great Pyrenees with a flock of sheep loose in the mountains."

Make no mistake: The small dog works hard. And their job is pursuing a lifelong strategy to persist in behavior that controls yours. Buster is a master of the trade.

PINT-SIZED PETS, BIG ATTITUDES

We call them small, but the mighty Chihuahua happens to be the mascot of Small Dog Syndrome. "Picture a typical Chihuahua walking down the street with its owner," says Kayla Fratt, CEO of Journey Dog Training. "If that dog is pulling on the leash, snarling at every dog (and sometimes every person) he sees, and if that same dog has other problem behaviors, chances are you are looking at a dog with so-called "Small Dog Syndrome."

Small Dog Syndrome is a learned behavior; it is not inherent to small breed dogs. "Those stereotypes exist simply because of the stature of the dog and how it affects their interactions, both with humans and other dogs," says Myers. While some small dogs may share some of these behaviors, such as barking at other dogs when on a leash, there is a difference between behavior that is fear-based and bad manners that are a learned response.

Small dogs tend to learn bad behavior from humans and fail to

This dachshund makes himself the center of human attention by jauntily jumping through the air.

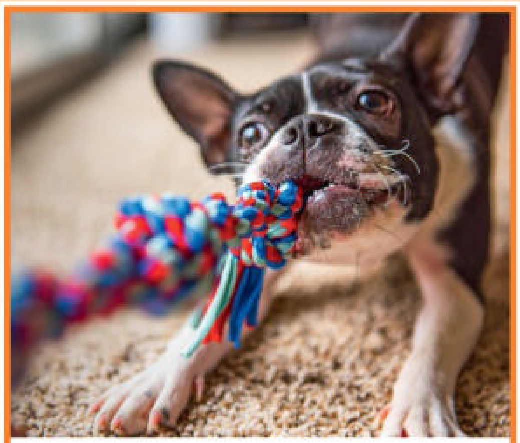
learn good behavior from larger dogs, says Myers. The undesirable behaviors persist because we are more willing to tolerate them in smaller dogs, even in the case of nuisance barking or aggression. It's not that scary when a small dog threatens to attack. In fact, rather than correcting bad manners, many people think the behavior is cute and may unwittingly reinforce the behavior that gives small dogs a bad rap.

Even fellow canines seem to give small dogs a pass. "Healthy dog social behavior is reliant on feedback that dogs get when they have social encounters with other dogs," Myers adds. But when you have a 2-pound micro-mini poodle carrying on like he wants to kill an 85-pound Labrador, the Lab is more likely to ignore the little dog instead of interacting with him the way he would with a peer-sized dog. Dogs will address bad manners from other similar sized dogs with a corrective response. When the small dog is simply ignored, the bad behavior may only intensify.

Small dogs' propensity for bad behavior is such a common belief that scientists and faculty of veterinary science at the University of Sydney in New South Wales, Australia, launched a project to study the data on height and body weight in relation to 36 behavioral traits of companion dogs using the Canine Behavioral Assessment & Research Questionnaire (C-BARQ). Their rather troubling conclusion? "Behavior becomes more problematic as height decreases." They noted that humans may be more tolerant of undesirable behavior among small dogs, while the same behavior in big dogs may be seen as potentially dangerous. Small dogs may be overindulged and overprotected, leaving their bad behavior reinforced.

> Like a spoiled child, the pampered tiny dog can sometimes unwittingly be encouraged to show bad behavior by human adults.

A spoiled child with no parental boundaries comes to mind. Humans who think that a small dog acting like a tiny tyrant is adorable just end up reinforcing that behavior. So a small dog who is petted when he snarls at a child learns that this aggression



Translator

These traits might point to Small Dog Syndrome.

Barking

A small dog who is anxious and insecure may bark, lunge or growl at other dogs passing by on the street.

Begging for Food

While many dogs will beg for scraps, a canine with Small Dog Syndrome will be particularly persistent.

A Disregard for Rules

This could manifest as a dog who refuses to be house-trained, or a dog that will not listen when he's told to get off the coffee table. He's the boss, and he rules his kingdom.

Persistent Whining

The small dog who whines when they don't get what they want could have an attitude problem. Yet the strategy works because the household often revolves around keeping the dog content and quiet.

Resource Guarding

She chases other dogs away from toys, food and water bowls. If you're sitting on the couch or at the dog park, she growls at another dog who is trying to say hello to you.

begets positive attention. It is we humans, the study suggests, who need to change.

SIZE MATTERS

Small dogs, like small children, need extra protection and special levels of care. People love their tiny pets for their quirky personalities, their babyish appeal and the easier job of feeding, walking, traveling and even disposing of their daily business. But however lovable small dogs are, they have some unique genetic and medical issues.

For example, ingesting a toxin is a much bigger problem for small dogs, says Myers. “It’s the dose that makes the toxin. And so getting into Grandma’s pill organizer for one day may be no big deal for your large dog, but if your dog weighs 5 pounds, it’s a whole different ballgame.”

Your small dog could be in danger just by wandering alone in the yard if a predator attacks from the sky.

Another serious concern with small breed dogs is anesthesia. “It’s not so much because of the dose, but because of physics,” notes Myers. “It’s harder to keep a small patient warm over the time of an anesthetic protocol, and keeping a patient warm is one of the biggest things that affects the [success of an] anesthetic experience.”

The American Animal Hospital Association confirms, “Very small/toy-breed dogs...are at increased risk for anesthetic complications because they are more prone to hypothermia and may be more difficult to intubate and monitor.”

Other small breed problems include dental disease, collapse of the trachea, knee caps dislocating from their socket, breathing problems and, particularly for dogs shaped like the dachshund, herniated disks. All of this falls under the umbrella of genetics. For example, a tiny dog has the same number of teeth as a large dog but a smaller jaw. Overcrowded mouths often result in gum disease and tooth loss later in life.

Of course, simply being a tiny dog in a large human household can be dangerous. A tiny dog leaping off the bed can break a bone more easily than a golden retriever would. Stepping on a Yorkshire terrier can cause much more damage than treading on a German shepherd. People who live with small dogs, therefore, need to learn to watch where they’re walking.

And while living with a small dog can bring joy and laughter, they can be immensely annoying if humans indulge their bad manners.

“It’s a vast oversimplification,” says Myers, “but one of my standard phrases when talking to new puppy parents is to remind them that dogs will behave in exactly the manner that’s required of them.” In other words, if you coo at your dog barking for attention, the dog learns that his behavior is effective.

On that note, I have to go. Buster has been barking constantly since I began writing this article. For a tiny dog, he has a surprisingly low tone, but he’s persistent. So please excuse me as I head off to give the little boss his evening treat!

This papillon belongs to a toy breed that stands 8 inches to 11 inches tall at the shoulder when fully grown.

A visible ID tag doesn't replace a microchip, and a microchip doesn't replace an ID tag. You need both.

Once your dog is microchipped, you must keep all identifying info up to date in the database.

GOOD GUARDIANSHIP

How to ID Your Pet

When it comes to locating your dog, microchips and tags are meant to work together.

Having your dog microchipped is an integral part of responsible and loving care for your pet. Microchipped dogs who become separated from their human families and end up at shelters are more than twice as likely to be reunited with their people as dogs who are not microchipped.

What happens to dogs who are not microchipped? They are more likely not to be returned to their original families and in some cases even euthanized because a new family does not adopt the lost pet from a shelter. Still, only a small fraction of dogs are microchipped in the U.S. (compared to 94% of dogs in the U.K.). It’s unfortunate, particularly because microchipping a dog is so easy.

HOW MICROCHIPPING WORKS

A microchip is about the size of a grain of rice, and a veterinarian inserts it under a dog’s skin with a hypodermic needle. It’s very similar to giving a dog a shot. Once that’s done, you register your dog’s chip with the company that manufactured it. The vet will give you the information you need, and the sign up can be done online.

Then, if the dog gets lost, the shelter, veterinary clinic or animal control facility where the dog is brought can scan the chip with a special wand. The scan will reveal the chip’s identification number, and a call to the microchipping company can match the number with the contact information you have provided. Presto—you and your dog will be reunited. There are now even some national databases that aggregate ID numbers from different microchip companies.

AN END TO DOG TAGS?

You might think a microchip replaces an ID tag. It does not. “Nothing replaces a collar with up-to-date identification tags,” says the American Veterinary Medical Association (AVMA). That’s because if your dog has a visible ID, the chances are much better that he will never end up at a shelter, even temporarily. Someone can simply read the contact information on the tag and call the person immediately to come get their pet. Problem solved. A collar with your phone number etched onto it is even better than a metal tag, which can become snagged on a branch or some other object and then come off. But sometimes a dog gets out of the house—or away from you—without the collar on, which is why the microchip serves as a reliable backup.

KEEP INFO CURRENT!

Too many owners change their addresses—or phone numbers—but forget to update the corresponding info with their microchipping company. Or a dog is rehomed, and the new family does not change the contact information.

The microchip in your dog is only as good as the identifying information that goes with the number. The AVMA and the American Animal Hospital Association have designated Aug. 15 National Check the Chip Day. But why not get a leg up and confirm the contact information associated with your dog’s microchip today—or make an appointment to have your dog chipped before the next Check the Chip Day comes around? In the unlikely and unfortunate instance that your dog becomes separated from you, it can literally keep her alive.

Reprinted with permission from Your Dog, *a publication of the Cummings School of Veterinary Medicine at Tufts University.*

If your dog gets lost, the shelter, veterinary clinic or animal control facility where the dog is brought can scan the chip with a special wand.

One large study found microchipped stray dogs were returned to their owners at more than twice the rate of all stray dogs.

LOST DOG
...and white spots
Call ...0100
REWARD

Posters and flyers with pictures of your dog can help to bring her home.

How to Find a Lost Dog

Sometimes, even if your beloved pet is tagged and microchipped, you can lose track of her. For pet owners, the desperate search begins—because the longer your canine companion stays lost the greater the risk she will never be found.

One of the best action plans we have seen comes from the Humane Society of the United States. "You need to think clearly, act quickly and create a game plan for recovering your pet based on typical lost dog behavior and your dog's personality," the group's website says.

First thing to do is search the neighborhood where your dog was seen last. Ask neighbors if you can check their backyards and request they contact you if they see her. Of particular importance is asking others not to chase your dog. "A friendly, confident dog is more likely to be found where people or other dogs gather," the Humane Society writes. "But a shy, frightened or injured dog, or one lost in an unfamiliar area, is more likely to be hiding or on the run."

The best way to find your lost dog is to spread the word. Get your printed material out all over the community: supermarkets, the local park, cafes and the dog park. Make sure to alert local vets and shelters. Use Facebook and other social media sites. If your efforts bring news of your lost dog, you can expect him to be skittish, possibly in hiding. You may literally need to lure him out. The Humane Society suggests that you visit the area with food and water, placing it out and returning every so often. You could leave a motion-activated camera behind and a local rescue group may supply you with a trap to capture your frightened dog.

For more help, check out Mission Reunite (missionreunite.org), Missing Animal Response Network (missinganimalresponse.com) and The Center for Lost Pets (thecenterforlostpets.org).

Finally, here are two final tips from the Humane Society: Beware of scammers who want to collect money by claiming to have your pet. And don't give up. Pet parents have found lost dogs even after years of searching.

—Pamela Weintraub

ENERGIZED & ENGAGED

Travel, play, positive learning and communication are just a few of the things that will keep your dog's mind active and alive.

PLAYBOOK

5 Ways to Wake Your Pooch Up to the World

The more freedom your dog has to navigate through life on her own terms, the more alive she'll feel.

Dogs can smell in 3D! Their brains use different odor profiles from each nostril to seek out new information.

Take your dog to a safe place where they can wander so they don't have to be tethered to you every moment.

Dogs, like people, need the right kind of stimulation for their brains to develop and stay alert throughout life. These helpful findings can boost your pup's cognitive prowess and make her more aware and immersed in the world at every age.

1 FOSTER A SENSE OF AGENCY

To truly enrich your dogs, you must know them as individuals and allow them to have a sense of control over their own lives. That means giving your dog choices. It can be profoundly limiting if a dog's entire life is spent hanging around waiting for us to decide when she goes for a walk; when she goes to the bathroom; when she eats; when she can interact with other dogs. Let the dog tell you when to go on a walk and where she wants to walk. Let your dog choose.

2 COMMUNICATE WITH DOGSPEAK

Using baby talk may not be great for a toddler mastering English, but a form of it could be helpful for your dog. In short, what you say should engage your dog through your tone of voice or inflection as well as the literal content of the words, according to University of York psychologists Alex Benjamin and Katie Slocombe. "We found that it's not only the way you talk—higher pitch and larger changes in pitch, similar to infant-directed speech—but also the content of what you are saying that were important to drive these effects," Slocombe explains. "Dog-relevant content" focused on things such as play, food and going out, said in a dog-directed tone of voice, are especially effective at capturing dogs' attention.

3 UNLEASH YOUR PET

Find a protected outdoor spot to unleash your dog. Do not force your dog to be tethered to you every moment of the day and in every single situation. Instead, take your dog someplace where he can wander but still know where you are. If possible, let your dog roll and chase something, smell the environment and run free.

4 CREATE OPPORTUNITIES SO THEY CAN USE THEIR SENSE OF SMELL

Because the part of a dog's brain allotted to the sense of smell is about 40 times greater than ours, exercising their nose gives dogs a real workout. Scent work can be anything from allowing a dog to spend as much time as they want sniffing the environment on their daily walks to using structured scent games. These can include food puzzles, snuffle mats and games in which the dog has to find hidden treats or a person who is playing hide-and-seek.

5 REMEMBER THAT YOU CAN TEACH YOUR OLD DOG NEW TRICKS—AND MANY OTHER THINGS

The truth is that training helps form a bond between dog and human, and older dogs have as much need in that department as younger ones. Teaching your older dog new things will help your pal feel alive and secure. Just be sure to keep training sessions short, to compensate for exhaustion, and give your friend delicious rewards for doing things right. Caveat: An older dog can sometimes have dementia, and you should be on the lookout for that, along with deficits in vision or hearing.

COMMUNICATION

Dogs Can Talk

Our canines do not have the physiology to form words, but with the help of buttons, they can relay messages to us in English, French or any human language you wish.

BY JILL NEIMARK

Bunny, a sheepadoodle, has learned to communicate over 100 words to her human, Alexis Devine.

The bond between humans and dogs is enduring and deep. But wouldn't it be nice if our best animal buddies could talk to us? What if they could hold a friendly conversation with us over breakfast, instead of the familiar "yap yap yap," wagging tail and doleful stare at the buttered toast on our plate?

That day has dawned. A global movement to teach dogs—as well as cats, birds, horses and other animals—to talk using human words is gaining momentum. With the help of "talking buttons" originally developed for individuals who have trouble speaking (also known as augmentative and alternative communication, or AAC), dogs around the world are expressing themselves in our own human language. They simply press the button for a given word and the button "speaks" it for them.

"I remember when I brought a new puppy home to keep my goldendoodle, Dewey, company," recalls Lindsay Mattock, a professor of library science at the University of Greenville, North Carolina. She has been training Dewey to use talking buttons since 2020. "Dusty, the new puppy, would pounce on him every morning, and he'd immediately walk over and push the 'mad' button each time. If he hadn't had buttons, I would not have known how he felt."

"Animals are sentient beings with feelings and emotions and intelligence that we have just begun to understand," explains Pilley Bianchi, founder of the Chaser Initiative and daughter of the late John Pilley, a behaviorist who trained his border collie, Chaser, to learn and respond to more than a thousand words.

It was 2018 when speech-language pathologist Christina Hunger

Dogs can use a series of buttons to communicate more nuanced or elaborate ideas.

Mastery of buttons starts slowly with a few simple, single words and increases in quantity and complexity week by week.

brought home a puppy she named Stella, and began training the pup to use the colorful talking buttons she already used at work with human clients. Today Stella uses more than 45 words and can string them together in phrases up to five words long. Hunger's bestselling book, *How Stella Learned to Talk*, opens with a touching anecdote. Hunger's fiancé was at the door one morning ready to take Stella for a morning romp, when the dog turned to look at Christina, and then walked over to her button board, pressing four buttons that announced: "Christina come play love you." She then stared at Christina and wagged her tail.

Hunger's work inspired Alexis Devine, owner of a sheepadoodle named Bunny, to try the talking buttons, and by late 2021, Bunny had over a hundred words in her repertoire. Today, dog owners around the world are teaching their furry best friends to "talk," and discussing their results online at a site called TheyCanTalk.org.

SUCCESS CAN BE ELUSIVE

"Button boards, or what we call augmentative interspecies communication devices, may help facilitate understanding between dogs and their owners," explains Gabriella Smith, an animal behaviorist working for the company CleverPet. Their site, FluentPet, offers a system of HexTiles and recordable sound buttons (where the owner can record a word in their own voice). Typically, says Smith, dogs communicate hunger by whining by their food bowls, or indicate "play" by pawing at their toys. "With buttons," she says, "we are seeing, at least anecdotally, these same behaviors accompanied by relevant button presses, such as 'dinner' or 'ball.'" Smith and her colleagues are now designing experiments to test dogs' understanding of buttons and their meanings. The How They Can Talk project currently has both experimental and observational studies underway, taking place in the homes of dogs. Either the owners act as citizen scientists, or the researchers come to the homes to test the pets. "We want to learn about the dogs' understanding of the buttons in controlled scenarios," explains Smith, "but we also want to focus on button learning over time, and what variables predict success."

Success can be elusive at first. When Mattock first tried to train Dewey, he showed no interest in the buttons. "He would press and sniff it and walk away," she recalls. "He didn't seem to get it." She kept trying, pressing a button and saying the word and then engaging in the activity with her dog. "I told a friend, I don't think he's interested and I don't want to force him. Then one day I was on a Zoom call and all of a sudden I heard 'outside.' And that night he used all three buttons appropriately and in context." Since then, she said, it has been easy to add buttons and their communication has deepened and broadened.

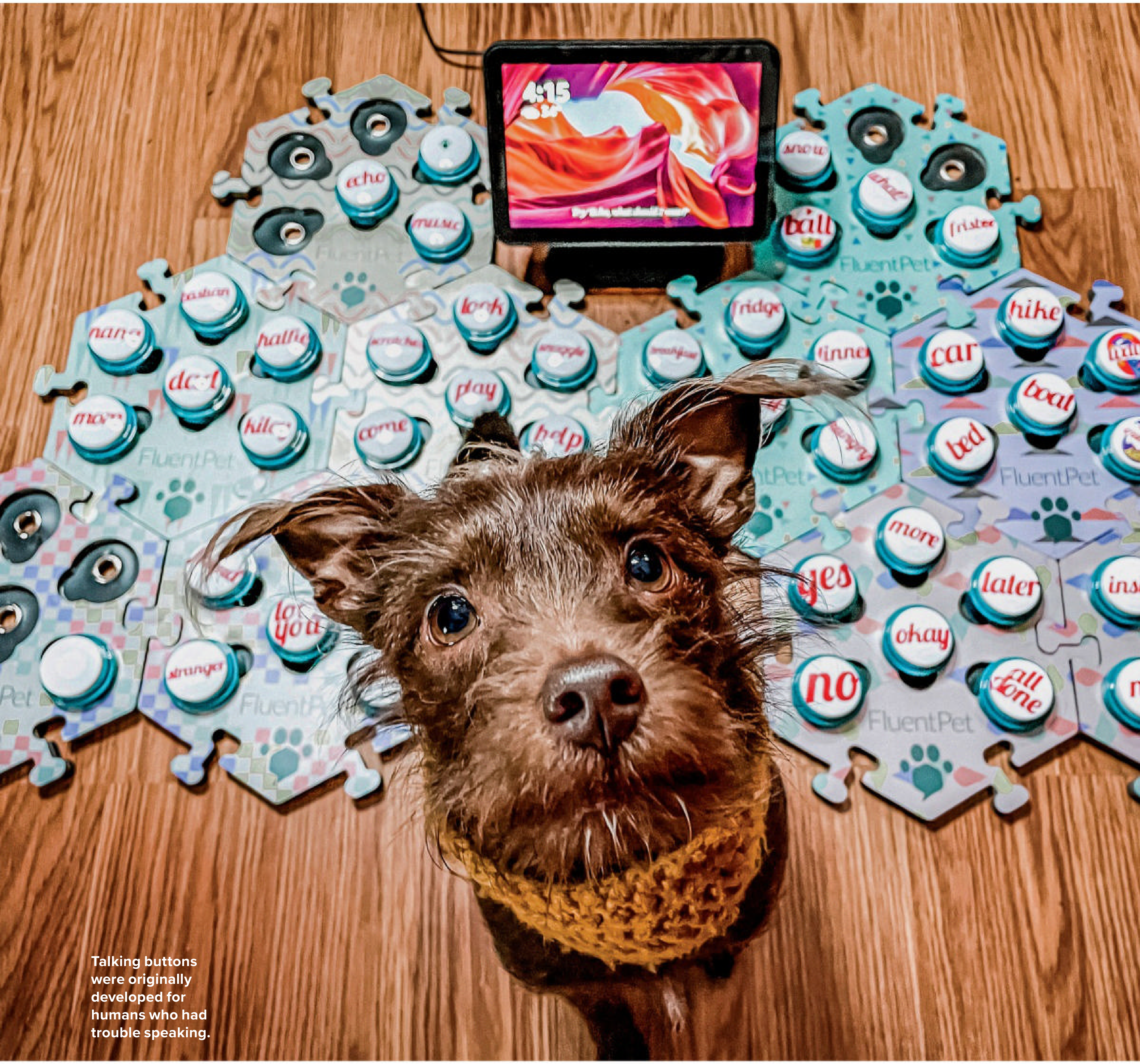
"Now he can tell me if he wants to walk in the woods, the neighborhood or the park," she says. "He broke a tooth and pressed 'ouch bone' after he chewed on a stick." Even more remarkable, one day he pressed the buttons "dinner, help, hungry, upstairs, downstairs." It turned out that some dog food had fallen inside a heating vent in the floor. Dewey was trying to convey that with the words "upstairs" and "downstairs."

And after having a small tumor removed from his mouth, he conveyed his distress over a pain-killing fentanyl pack by continually pressing the button for "concerned." He had learned that word when Dusty, another dog, had slipped out of his leash and raced off to chase a deer in the woods. "I was shouting Dusty's name and telling Dewey, 'Mama's concerned,' and later added that button." Mattock called her vet, and he agreed she should remove the fentanyl patch, since dogs can feel disoriented on it.

Stella can combine up to five words together to create unique phrases, answer questions and express her thoughts.

At this moment in time, says Bianchi, data is still largely anecdotal. But anecdotes are where change begins, she explains. "Science takes a while to catch up. The more people integrate this approach into their household, the more scientists will pay attention. One-way conversations are never valuable in establishing relationships. If we can create a two-way mode of communication between species, that's a positive in every way."

Leo Trottier of CleverPet keeps refining his company's buttons for teaching dogs language.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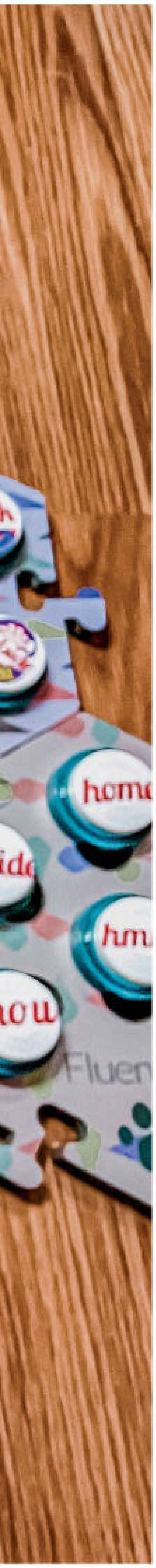
yes
later
okay
no
all done
stranger
love you

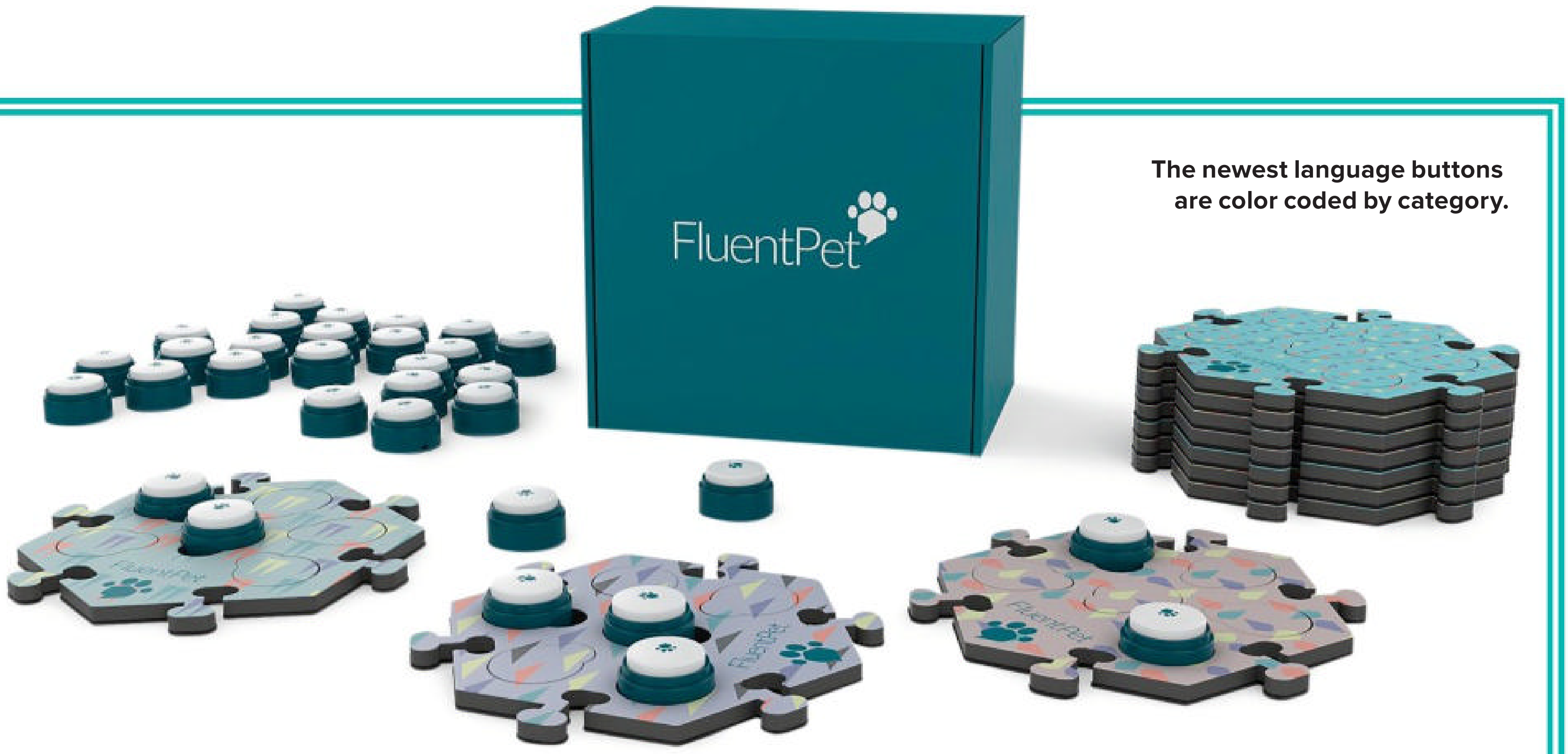
Talking buttons were originally developed for humans who had trouble speaking.

The question, says Bianchi, is how much the dogs really understand syntax and grammar. Do we really know what they mean when they say "want?" Do they understand why "want" precedes "walk" or "nap?" We can only learn by further and deeper experimentation with them.

Bianchi thinks one important way to train dogs in extensive vocabulary is to do it the way her father did: Engage them in play as a reward for learning. (See "The Power of Play," page 86.)

In the meantime, says Mattock, talking buttons have transformed her relationship with Dewey. "He can talk back now. He can let me know how he's feeling or what he wants. I log all the buttons he has pressed in a database, and I realize now Dewey is developing a history. I'm an archivist, and in a sense, he now has an archive. We wouldn't be able to tell Dewey's whole story without those buttons."





The newest language buttons are color coded by category.

How to Teach Your Pet the Art of Buttoning

Innovative technology offers a way for your pooch to communicate directly with you, bringing a whole new meaning to the command, “Speak!”

In 2014, cognitive scientist and software engineer Leo Trottier launched the company CleverPet with a Kickstarter campaign for a device that would teach dogs how to solve puzzles presented as light patterns. The reward would be extra food. His ultimate goal was to be able to communicate in a more sophisticated way with dogs, cats and other animals. “I thought it would take us a few decades, teams of coders and many devices for us to learn to communicate in a more sophisticated way with our pets,” he says. And then along came Christina Hunger, a speech-language pathologist who pioneered the use of talking buttons with her dog Stella. Talking buttons originally were developed as an alternative for those people who have trouble speaking.

In the early days of the talking pet movement, owners would buy buttons on Amazon and glue them to plywood boards. At FluentPet, the branch of CleverPet devoted to talking buttons, Trottier has employed important insights into memory to enhance the button technology. One of them is that we tend to help ourselves remember things by grouping them into smaller “chunks.” For instance, we remember phone numbers by prefix, area code and number. That is three chunks for 10 numbers, and chunking helps us remember the entire number. “We’ve done something similar,” explains Trottier. The buttons, which are imprinted with both the word and a symbol, are embedded into colorful HexTiles that can interlock. The starter kits contain words that are grouped into six categories, each with its own distinctive color: social words, action words, subjects (who), objects (what), places and descriptions. The categories were inspired by the work of a deaf American teacher, Edith Mansford Fitzgerald, who used this approach to help her students learn grammar.

“We cannot yet make claims that this approach to organizing buttons works,” notes Trottier, but he says early reports from pet owners suggest they facilitate learning and communication. And what has this grand experiment revealed? “Dogs are more like us than I realized,” he says. “I always thought they had cognitively rich mental lives, but what has surprised me is that their concerns turn out to be so relatable and familiar. It seems that pets raised in our homes, inhabiting the same house with all its routines and priorities and dramas, have a lived experience that is actually similar to ours. They want to eat, sleep, play, learn, communicate, love and be loved.”

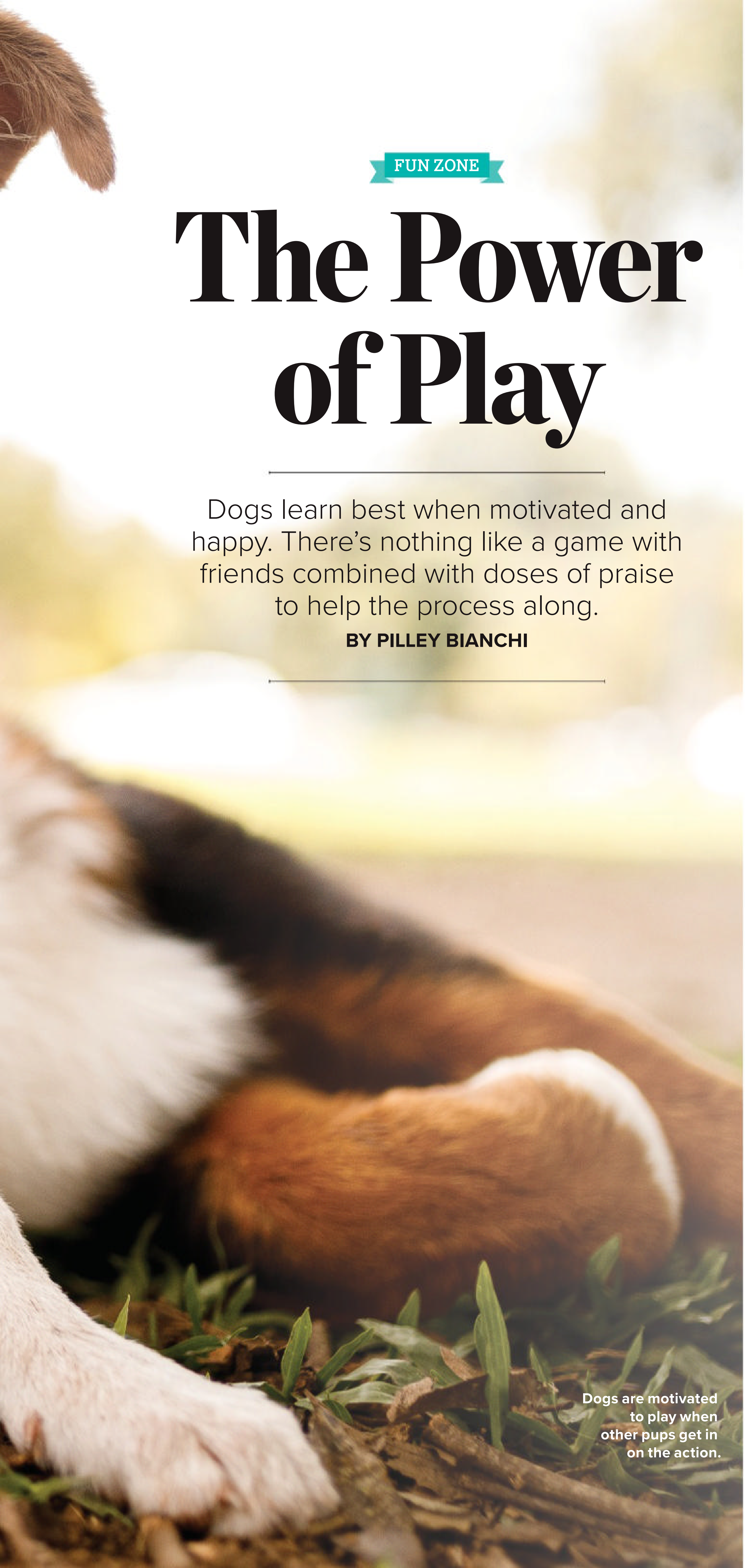
The act of play and collection of praise are two of the most valuable things in a dog's life.

FUN ZONE

The Power of Play

Dogs learn best when motivated and happy. There's nothing like a game with friends combined with doses of praise to help the process along.

BY PILLEY BIANCHI



Dogs are motivated to play when other pups get in on the action.

Perhaps you've heard of Chaser the border collie, the dog who knew over 1,000 words and had a huge pile of toys to show for it. My father John Pilley was Chaser's human parent, teacher and research partner. As a university professor and research behaviorist, he knew that learning a new language required a vocabulary and Chaser's would be the names of her toys—all 1,022 of them to be exact. She also learned verbs, adverbs, adjectives and prepositions, so yes, her language learning was serious, but the methodology not so much.

Learning should be fun, and research supports this idea. It also supports the power of praise. When the student gets it right, let them know over and over again. "Good dog!" is not just for puppies. Chaser's learning demonstrates that the powers of play and praise are virtually limitless.

The type of learning that my father created with Chaser stemmed from her being motivated, excited, locked and loaded. This concept encompassed kicking some antiquated concepts to the curb and shining the light on a new day for dogs. Science has confirmed that dogs, similar to humans, have an extensive array of emotional experiences. Just like toddlers, they have an innate desire to play. From working dogs to family dogs, play is an integral part of learning.

NATURAL ACT

Dogs play naturally. Starting from the time they are puppies, they learn to play by themselves and with each other. They play with people and even other species. We silly humans can spend hours watching dogs on social media that are engaged in play-based behavior. It's so darn entertaining it's addictive. And yet, play is just another day at the park for your pet. They love playing monkey-in-the-middle with a giant beach ball tossed over their head, or just chasing another animal or children around the yard. They jump, leap, tug, run and play so hard that their back legs can get ahead of their front, and they take a tumble—only to recover with a brief body shake to hit their reset button and start again. These goofy, haphazard and seemingly innocuous behaviors play a critical role in our pup's development.

From the moment my parents brought Chaser home, she loved playing with toys. To describe her as "a player" was an understatement; she was a grifter of play. If an object was allowed in her mouth for her to shake, rattle and roll, it was her favorite toy. But there was an important hitch. It was her favorite toy only if someone was playing with her. She always needed a companion to toss, catch, chase or hide the toy. She never played by herself.

Channeling her innate instinct to play became a gold mine for teaching her human language. Seeing her with her huge pile of toys could seem to some at odds with serious scientific research. But it's not as silly as it seems. Play literally fast-tracks learning in humans and animals. It deepens relationships, builds confidence and makes learning fun. If we are having fun, we are more likely to repeat a behavior, which brings us full circle to repetition, which is mandatory for mastering anything in life. Who, other than children, have such a high capacity and joy for playful repetition? Only dogs.

HOW MEMORY WORKS

When it comes to learning, the canine memory system has a key role. How does "play" cause dogs to log the names of objects into their cranial hard drive? Just like humans, it all comes down to value. If you meet someone at a party that you think is cute, you are more likely

The Importance of Having a Good Time

For dogs, play provides the ultimate rush and heightens their motivation to keep on engaging with others and learning new things. Here's why.

1

Playing Builds Confidence

Play is a natural instinct for dogs. Activities such as chasing games, fetching and finding are hugely satisfying for your pet. It gives them an opportunity to just be a dog, which makes them feel good about themselves.

2

Playing Strengthens Your Relationship

You will never find a more willing and accepting playmate than your dog. Whenever you engage with play behaviors such as throwing and fetching a ball you are strengthening the interspecies bond that has coevolved for humans and dogs for some 40,000 years.

3

Play Means Your Dog Is Doing What She Likes

We want to put the dog in a situation where the vibe and emotion are positive. If you teach your dog through play, you are enabling her to do what she likes, making repetition—and learning—far more fun.

4

Dogs Can't Get Too Much Play

Dogs are highly likely to satiate on treats, but most dogs never get tired of playing. In this way they are like children. Their joy of repetition is exceeded only by our exhaustion of it.

Doggy Do's

- Play with your pet.
- Experiment with play activities to discover what your pup likes.
- Let your dog win the games.
- Always end a training session on a positive note through abundant praise.

Doggy Don'ts

- Don't rely on the dog park as your only playtime session. A visit there is good for exercise for your pup, but it is never a suitable alternative to engaging with your dog's heart and mind through interactive play.

Play deepens relationships, builds confidence and makes learning fun.

Your dog can max out on treats, but she can never get enough play—especially if that play is with you.

to remember their name. The same is true for dogs.

If the experience is pleasurable, pairing a name with an activity or object rings the proverbial bell. For your pup, these are words such as "walk," "out," "ball," "Frisbee" and "good dog!" On the flip side, if the experience is painful, aversive or simply not fun, this also connects the dots. These can be words such as "vet" and "bath," or it can be a person like your creepy Auntie Claire who hangs onto a hug a little too snugly. These words and experiences have value—positive and negative—and it doesn't take long for our pups to code these words into their short-term and long-term memory.

Because dogs understand so much, we sometimes even resort to spelling in their presence. But that doesn't work for long. Dogs are masterful listeners and can decode the C.O.D.E. with remarkable speed.

Chaser learned hundreds upon hundreds of words. But in order for her to remember the names of her toys, the toys themselves had to have value. Their value was the pure enjoyment they brought to her. It was the engagement and fun of playing with them as we threw them to her, or hid them in plain sight, then on top of the table, or in the bathtub. She loved the game of hide-and-seek.

Dogs, like children, learn through the processes of association

Dogs are born with a remarkable, childlike purity of spirit that remains throughout their lives.

and “fast-mapping”—the ability to acquire a word rapidly with minimal information—that are powered by play. For example, children learn the name of Santa Claus because he’s big, jolly and slides down the chimney once a year bringing them lots of gifts. They learn “spoon” because it delivers food to the tummy. Chaser didn’t have these specific types of associative markers, but what she did have was impressive: It was joy. She simply loved to play with her toys—and with us.

DOGS CAN’T GET ENOUGH

Play is not only a powerful learning tool, but a path to happiness. It cuts down on fear and anxiety and is hugely important in cementing our bond. On the flip side, the absence of play in dogs suggests poor levels of care. As Chaser illustrates, a dog can never get enough play.

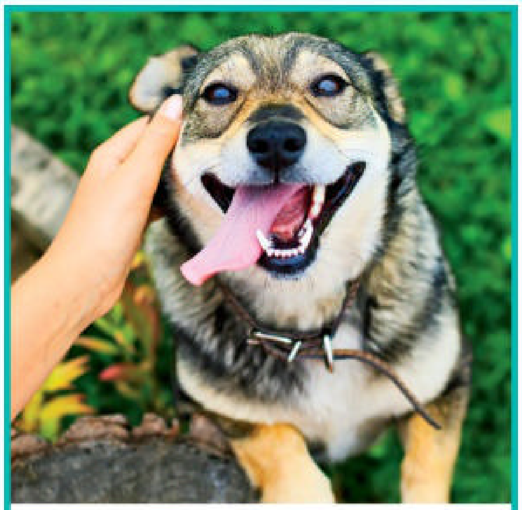
Dog lovers often take play for granted. But as crucial as it is, its exact role has stumped animal behaviorists for decades. While animals have developed specific behaviors for survival, play is different. It often consists of large, vibrant, exaggerated movements that in the wild could easily attract the attention of predators. And because play is so acrobatic and animated, even if it doesn’t attract a predator, it’s certainly not conserving energy—precious energy an animal might need to survive in extreme conditions.

For reasons like these, researchers studying animal behavior have had a difficult time understanding why animals play. But let’s cut through the scientific jargon: The primary reason is that it feels good.

To this, Chaser would agree. She was living proof that lifelong, perpetual play kept her young at heart and enlarged her world. All dogs have this capacity. They are born with a remarkable, childlike purity of spirit that remains throughout their lives. They demonstrate so beautifully that the simple act of play enables us to be in the moment of joy.

If we don’t take a page from their “play” book, we are truly the lesser of the two species.

Pilley Bianchi is founder of the Chaser Initiative. Her new book with illustrator Calum Heath will be published by Princeton Architectural Press in 2023.



High Praise

Positive feedback is an incredibly powerful motivator.

Praise Reinforces a Behavior

If you see something you like that your dog is doing, immediately name it and say “good girl!” No tools are necessary except your observation, praise and lots of petting.

Praise Builds Confidence

We all need to be told we are doing a good job.

Praise Doesn’t Run Out

Withholding food or offering treats as rewards is not the best motivation for learning. You can reward with food in the beginning, but in general, treats are very distracting to the dog. When they are sated, the motivation disappears.

Praise Is Universal

Play and praise at home simulates the motivation that powers working dogs, those courageous heroes who fly under the radar in battle, make catastrophic rescues and sniff out disease. It’s not treats, punishment or obedience that drives them, it’s their favorite activity followed by praise. Now go play with your dog!

When you take your dog camping, make sure that he sleeps inside the tent with you.

You could say Granger is a well-traveled pup. You'll find her somewhere in the continental United States, traveling state to state in a modified Scout truck camper with her humans Dani and Mike. The wirehaired pointing griffon is one of many pets joining the nomadic life trend, fueled by the untethering of the human workforce from their office desks.

The ability to thrive while traveling didn't come overnight for this wanderlust pup. A year ago, her pet parents scrapped the whole idea of life on the road. They were bummed, but respected Granger's dislike for moving vehicles. Then, Granger found comfort in traveling with her best pal—a white feline named Walker.

Not all dogs are born for life on the road, or take on the status of weekend warrior. But your dog will still likely need to buckle up for a car ride or other means of travel during their lives. The good news is you and your dog don't have to navigate this winding road alone. With a little training, insight into your pup, and their favorite treat (or furry pal), your dog can be on their way to wanderlust status—or at least a pleasant ride in the car.

DO DOGS LIKE TO TRAVEL?

A few pups go wild with joy at the sight of a suitcase. But most need positive reinforcement and dedicated training with their trusted human to enjoy a weekend road trip or a flight on a plane. Before modifying your dog's behavior for travel, however, it's important to understand what's going on when they resist. What does your pup actually associate with the experience, and why might leaving home make them anxious or upset?

"Some dogs were bred to be carried around by the Queen, not caring where they are," explains Washington State research psychologist James Ha, PhD, co-author of *Dog Behavior: Modern Science and Our Canine Companions* (think poodles, spaniels and Labrador retrievers). Other, more

HAPPY TRAILS

On the Move

Whether it's planes, trains or automobiles, there are ways to make traveling with your pup a little easier for you both. **BY JANELLE LEESON**

On any trip, make sure to bring bottled water for both you and your canine companion.

Dogs can get motion sickness just like people. To help, open the window and don't feed them before a long drive.

ancient breeds maintain a strong sense of home, making them ideal for protecting human houses and livestock (think malamutes, shar-pei and the saluki). The former is more likely to experience separation anxiety when not by your side. The latter is more likely to experience anxiety when leaving home.

Of course, the breed of your dog doesn't necessarily determine whether or not they'd like to spend a long weekend at a pet-friendly Airbnb. Life experiences and the positive and negative associations that come along with them shape every dog differently. If family travel has been pleasant and joyous, your pup may react positively. Chaotic or innervating trips are sure to give your dog pause next time around.

MOTION SICKNESS

If your dog doesn't enjoy travel, motion sickness could be to blame. It typically shows up in puppyhood, due to the immature development of the inner ear. As dogs grow and develop, they tend to become less wobbly and less likely to experience sickness in a moving vehicle.

Small animal veterinarian Lindsay Butzer, DVM, of Clint

Never leave your dog alone inside a locked car. He or she can be badly hurt or even killed by extreme heat or cold.

Moore Animal Hospital in Boca Raton, Florida, has some tricks and tips to make rides smoother for your pup, and potentially save you a cleanup in the back seat.

- Encourage your dog to look forward, not at the world flying by from the side window.
- Skip meals before the car ride.
- Crack open a window or two. The breeze will settle air pressure fluctuations that can cause sickness.

If you've tried everything and your dog is still experiencing motion sickness, you can ask your veterinarian about prescription anti-nausea medication. "One of the best ones is Cerenia. It's the only FDA-approved prescription for vomiting due to motion sickness in dogs," Butzer says.

ROAD WARRIORS

Traveling long distances in the car takes a little extra prep compared to a drive to the local park. But, like all car rides, your dog should be secured in a crate, behind a barrier or strapped in. This might mean training at home before a paw ever touches the car seat.

"I would suggest taking the time to introduce the dog to the car by rewarding them for getting in and out of the car and taking short journeys before a long one," says Lynne Gilbert-Norton, the owner of Pets Decoded LLC and a Salt Lake City-based canine behaviorist with over 20 years of academic and applied experience.

Once you and your dog have the basics of car travel down, it's time to plot your journey together. You're going to want to map out stops along the way for potty breaks and walks. Plus, think about when and where your dog will enjoy their meals and how you plan to keep them hydrated.

On the checklist of essential supplies, double-check that your dog's microchip and collar info are up to date and accurate. Have vaccination records on hand if you plan to cross state lines. "And to keep them feeling a bit at home, go ahead and bring their favorite blanket or bed, plus whatever toys or comfort items will reassure them," Butzer adds.

HOW TO FLY

There are two ways your dog can travel by plane—tucked away in an airplane-approved carrier at your seat or secured in a crate in the cargo hold. Given the unique and challenging method of air travel, not all dogs are the jet-setting type.

Dogs need to meet varying requirements to fly in-cabin with their human companion—from weight to age and breed. If your dog doesn't meet your selected airline's requirements, they'll need to travel in the climate-controlled airplane hold.

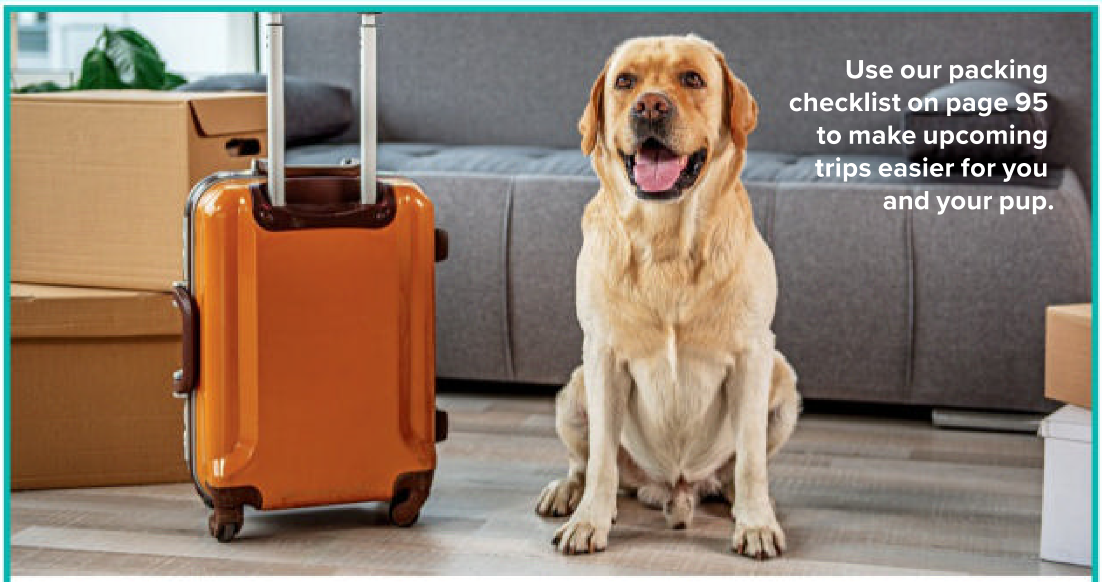
Just check that box when purchasing your ticket online and a fee will be added for your pooch.

And while airlines strive to secure your pet on the same flight

Pup-Approved Packing Checklist

"The best way to think of what your dog needs to travel is to start with everything they need for a day at the park. Then add everything you can think of that makes them happy and comfortable," advises Lindsay Butzer, DVM.

- ☐ Health Certificate
- ☐ Vaccine Records
- ☐ Medications
- ☐ Up-to-Date Microchip
- ☐ Collar With Accurate ID Information
- ☐ Leash
- ☐ Harness
- ☐ Food
- ☐ Food and Water Bowls
- ☐ Waste Bags
- ☐ Treats
- ☐ Toys
- ☐ Bed
- ☐ A Favorite Blanket or Stuffy
- ☐ Weather-Appropriate Gear and Clothing (Winter Jackets, Raincoats or Booties)


Use our packing checklist on page 95 to make upcoming trips easier for you and your pup.

ACTION PLAN

Pet-Friendly Hotels

Doing research before you go ensures a stress-free stay.

Ask Questions

How many pets are allowed per room? Can I leave my dog alone, and if I do, do they need to be crated? What cleaning precautions do you take between pet visitors to prevent disease transmission?

Scope Out the Area

Find an emergency veterinary clinic (just in case) and look for parks, restaurants and other establishments that will welcome your pet.

Keep Your Dog's Needs in Mind

"The biggest tip I have," says Shannen McNee, certified animal behaviorist at the Toronto Humane Society, "is to keep stressful situations to a minimum." This might include bringing their favorite supplies from home and not lingering in the lobby.

and route as you, that's sometimes not guaranteed.

"If your dog needs to travel in the hold, consider their personality and ability to cope alone for a long period without you," Gilbert-Norton says. Becoming familiar with the crate at home and teaching them to stay relaxed will make the trip safer for everyone.

If your dog is showing signs of anxiety brought on by separation, strangers or long periods in their crate, Gilbert-Norton urges pet parents to rethink their travel plans.

When travel by air is a must, talk with your veterinarian about medications that can provide relief. Over-the-counter calming chews might do the trick. Other times, prescription trazodone or alprazolam could be right for your dog.

Before your pet boards an airplane, they'll need proper documentation including their health certificate, proof of vaccinations and any diagnostic testing required by your destination. Your vet can help get the paperwork in place and meet the airline's timing requirements before traveling. Preparation for a trip to a foreign country with your pet can take a few weeks to months, so talk to your vet as soon as you know your travel plans.

TRACK AND TRAIN

There are plenty of accessories created to give traveling dogs their comfort and space, from collapsible bowls to waterproof blankets. But U.K.-based canine behaviorist Annie-Mae Levy says it's still hard to stop wandering hands from petting her London-bound charges. Traveling on crowded public transit can be challenging because it's difficult for many members of the public to resist petting your animal companion when it's not

When flying with a dog, bring her in a carrier with you and try to avoid the cargo bay.

If travel does not agree with your pet, you should consider leaving her at home with a sitter during your next trip.

appropriate. That's why cue training is Levy's first task when prepping for public transit travel with dogs. "'Tuck' is a cue I use to ask a dog to go under or between my legs. People are less likely to trip over my dog and they'll be less inclined to reach out and touch the dog."

Other handy tools: indifference training to people, sounds and other dogs—plus a well-known "settle" cue.

SHOULD I TRAVEL WITH MY PET?

"Be realistic about your dog's personality, mood, coping skills and level of training," advises Gilbert-Norton. Sure, her pups dutifully pile into the car for road trips, but the canine behaviorist also knows they would rather stay at home than get on a plane, train or other means of transport—and she respects this.

For Dani, traveling with Granger makes anywhere feel like home—and it's clear that Granger shares her comfort and enthusiasm for exciting journeys and adventures. Days on the road, well, they never feel mundane with a furry co-pilot by your side.

Inside Your Dog's Mind

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